

Evolving Workforces

Scoring Tech Talent 2024

REPORT

Demand Surges
for AI-Specialty
Tech Talent

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CBRE



Despite slower tech talent job growth last year, demand for highly skilled workers in cutting-edge sectors like artificial intelligence has increased.



U.S. tech talent employment grew by 3.6% overall or 213,000 jobs in 2023, while AI-related jobs grew by nearly twice that rate. Software developers and programmers, which account for most of these AI roles, accounted for 72% of all new tech talent jobs in 2023.

The slowdown in overall tech talent job growth last year (3.6% vs. 7.3% in 2022) allowed non-tech industry employers to increase their share of tech talent hiring. The professional & business services and transportation, warehousing & wholesale sectors added tech talent jobs at a faster pace than the high-tech industry (Figure 1).

In Canada, tech talent jobs increased by 1.7% or 18,400 last year, led by tech management and computer support positions across all industries.

Figure 1: U.S. Tech Talent Employment Growth by Industry (2023)

Industry	Jobs Added	Growth Rate	Total Jobs
Professional & Business Services (excluding High-Tech)	49,760	7.1%	747,250
Transportation, Warehousing & Wholesale	45,390	18.3%	293,620
High-Tech (Includes computer software & services and computer product manufacturing)	28,978	1.2%	2,466,360
FIRE (Finance, Insurance & Real Estate)	28,620	5.7%	533,290
All Others	60,392	2.9%	2,122,210
U.S. Total	213,140	3.6%	6,162,730

Source: U.S. Bureau of Labor Statistics, April 2024.

The AI specialty share of total U.S. tech talent job postings increased to 14.3% in June 2024 from 8.4% in late 2019.

Although overall tech talent and AI-specialty job postings as of June are well below 2022 peak levels, they have rebounded from Q4 2023 averages. AI-specialty job postings in Q2 2024 were up by 27% to approximately 44,000, while overall tech talent postings rose by 5% to 342,000, based on CBRE's analysis of data from labor analytics provider Lightcast (Figure 2).

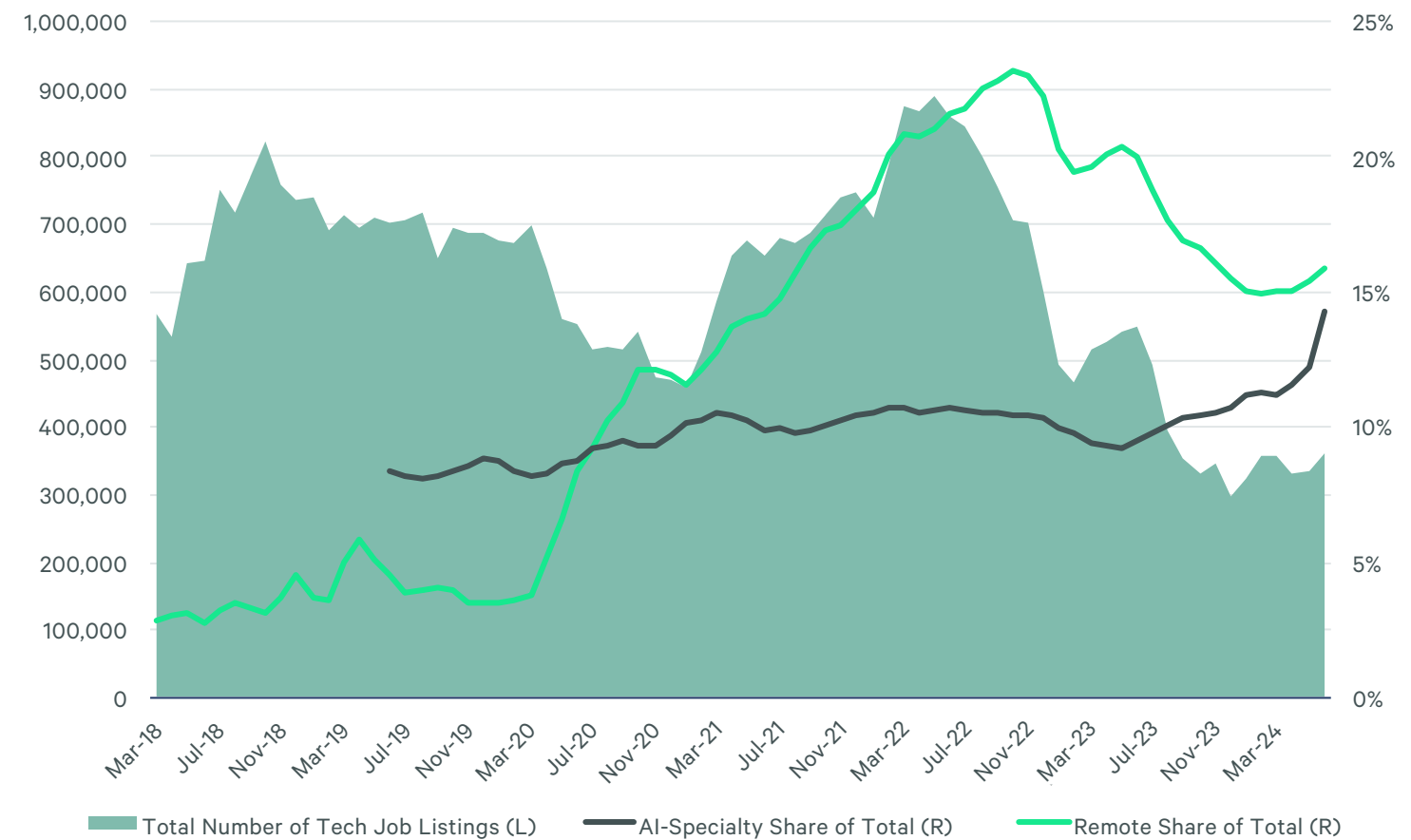
Remote working arrangements have allowed tech talent employers to diversify their workforce both geographically and demographically. While most employers have adopted hybrid arrangements of both in-office and remote work, 15% of U.S. tech talent job postings offer "fully remote" as an option.

Building security company Kastle System's 10-city "back-to-work barometer" of U.S. office occupancy levels increased by 2 percentage points over the past year. The attendance rate currently is 50% of pre-pandemic levels and indicates that hybrid work arrangements likely will persist, especially in the most tech-concentrated cities that have the lowest attendance rates.

AI is rapidly becoming a catalyst for growth, driving new tech talent hiring and office space demand. The San Francisco Bay Area has attracted more than half of AI venture capital funding nationwide since 2019, according to CB Insights. About one-fifth of U.S. AI talent resides in the San Francisco Bay Area and one-quarter of new office leases in downtown San Francisco were signed by AI companies, based on data from LinkedIn Talent Insights and CBRE Research.

AI-related job growth likely will spread across North America as further development and deployment occur, boosting economic and real estate activity in many tech talent markets.

Figure 2: AI-Specialty & Remote Share of Total U.S. Tech Talent Job Listings



Source: CBRE Consulting, Lightcast, June 2024.

Note: Remote share of computer and mathematical jobs that mention remote work as an option each month.

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Scoring Tech Talent is a comprehensive analysis of labor market conditions, costs and quality in North America for highly skilled tech workers that can help decision-makers fulfill critical business and innovation objectives.

The top 50 markets in the U.S. and Canada were ranked according to their competitive advantages and appeal to both employers and tech talent employees. Eleven Latin America and 25 up-and-coming U.S. and Canada markets were also analyzed and ranked. The analysis provides further insight into the quality of tech workers, their demographics and diversity and how tech talent growth patterns are impacting cities and real estate markets.

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Tech talent fundamentals by market.

Key Takeaways

01— Score

This year's top-ranked tech talent markets are the San Francisco Bay Area, Seattle, New York Metro, Toronto and Austin. Washington, D.C. fell to sixth place, replaced by Toronto for fourth, while Austin rose to fifth. Salt Lake City, Raleigh-Durham, San Diego and Detroit improved the most in rank within the top 25. Canada's Waterloo Region, along with Madison, WI and Orlando in the U.S., were the highest ranked small markets.

02— Artificial Intelligence

In the U.S., demand for AI software engineers boosted tech talent job growth above the rate for all occupations. The San Francisco Bay Area, Seattle and New York Metro are the largest talent clusters for AI development, accounting for 44% of all AI-specialty tech jobs. Toronto, Vancouver and Montreal are the leading AI-development markets in Canada, accounting for 60% of the country's AI-specialty tech jobs. The tech industry employs almost half of all AI-specialty talent, followed by the professional & business services and financial activities sectors. AI development likely will be a catalyst for economic growth and improved real estate fundamentals in many tech talent markets.

03— Jobs vs. Education

Toronto, Calgary and the San Francisco Bay Area created substantially more jobs than tech degree graduates last year, while New York Metro, Washington, D.C. and Boston produced more graduates than jobs. Tech talent job creation was compared with the number of tech degree graduates in each market to determine top job and education markets.

04— Diversity

Tech talent across all industries was predominantly White, Asian and male relative to both the overall and office-using workforce. Hispanics, Blacks and females were underrepresented in both tech talent occupations and the tech industry, as well as concentrated in the lower-wage brackets. Relative to an office-using workforce benchmark, the most diverse large market for tech talent was Montreal and the least diverse was Los Angeles-Orange County. For females in large markets, Ottawa was the most diverse and Kansas City was the least.

Tech talent workforce diversity is expected to improve since the share of recent tech degree graduates from underrepresented race/ethnic groups and females was higher than those already employed.

05— Cost

The total annual labor and real estate cost for the typical 500-person tech company occupying 60,000 sq. ft. of office space ranged from \$35 million in Quebec City to \$81 million in the San Francisco Bay Area. Since tech industry wages are 17% higher than the U.S. average, tech companies can expect higher annual costs.

06— North America Opportunity Markets

Fostering talent development in lesser-known and underdeveloped markets could offer additional talent pools to employers seeking to expand their geographical reach, uncover opportunities and increase cost efficiency. These markets are spread across Canada, Latin America and the U.S. Midwest and South.

01

What is Tech Talent?

Highly skilled tech talent workers total 7.3 million in the U.S. and Canada and comprise more than 20 occupations.¹

Although these positions are spread across all industry sectors, they are mostly concentrated in the high-tech industry (Figure 3). Through this occupational lens, a software developer who works for a financial services or health-care company is considered tech talent.

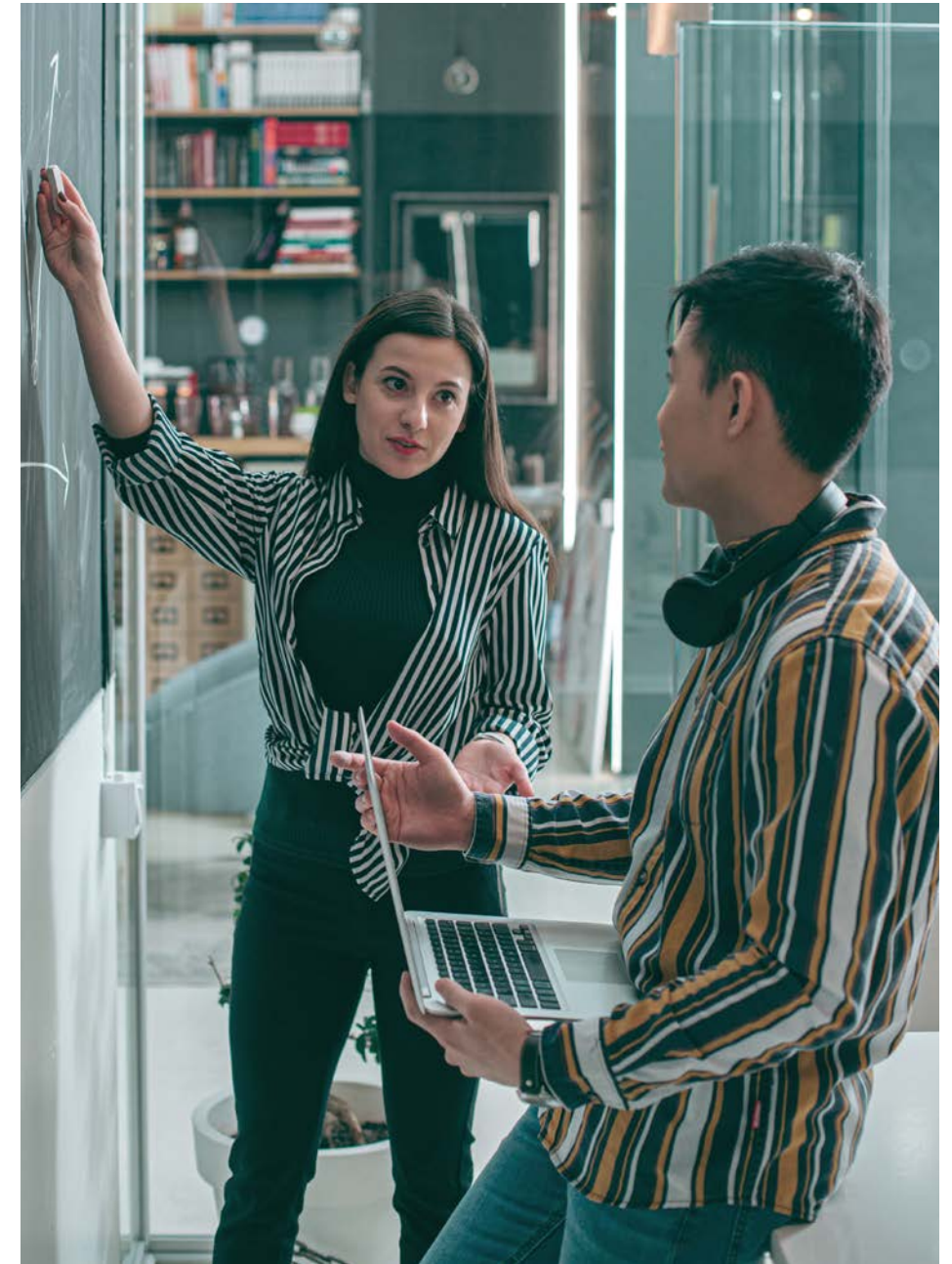
The 6.2 million tech talent workers in the U.S. and 1.1 million in Canada accounted for a respective 4.1% and 6.4% of each country’s total workforce in 2023. The number of U.S. tech talent workers has increased by 811,000 or 15.2% since 2019, substantially higher than the 3.4% rise in total U.S. employment. In Canada, tech talent grew by 30.2% vs 7.5% for overall employment since 2019.

Figure 3: Tech Talent Workforce by Industry (2023)

Industry	Share of Total U.S. Tech Talent Workforce	Share of Total Canada Tech Talent Workforce
High-Tech (Includes computer software & services and computer product manufacturing)	40.0%	40.2%
Professional, Scientific & Technical Services (Excluding High-Tech)	12.1%	7.9%
FIRE (Finance, Insurance & Real Estate)	8.7%	11.6%
Other	8.4%	11.1%
Management of Companies & Enterprises	6.7%	N/A
Government	5.5%	9.3%
Transportation, Warehousing & Wholesale	4.8%	4.0%
Education	4.4%	3.5%
Manufacturing (Excluding High-Tech)	3.8%	5.1%
Information (Excluding High-Tech)	3.2%	4.0%
Health Care	2.5%	3.2%

Source: U.S. Bureau of Labor Statistics, Statistics Canada, April 2024.
 Note: Management of Companies & Enterprises is included in the Other category for Canada.

¹ Tech talent occupation categories include software development and programming; computer support, database and systems; technology- and engineering-related; and computer and information system management.



02

Which are the
top-ranked Tech
Talent markets?

Fifty of the largest markets by number of tech talent professionals in the U.S. and Canada were analyzed to create a scorecard ranking them comparatively (Figure 4).

The scorecard uses 13 metrics to measure each market’s depth, vitality and attractiveness to companies seeking tech talent and to tech workers seeking employment. Each metric is weighted by its relative importance to job creation and innovation. Tech talent concentration metrics have the highest weights because they signify clustering of tech workers. Labor costs for tech talent are weighted more heavily than office rents because companies allocate more capital to labor than to real estate.

The San Francisco Bay Area, Seattle and New York Metro remained the top three tech talent markets this year. Toronto and Austin each moved up one spot to round out the top five. Washington, D.C. fell two spots to sixth due to slower job growth. Markets that moved up the most within the top 25 were Detroit (+5 spots), Salt Lake City (+4 spots) and Raleigh-Durham and San Diego (+3 spots). Markets that moved down the most were Edmonton, Quebec City and Pittsburgh.

Figure 4: Tech Talent Scorecard Ranking

01 San Francisco Bay Area 83.2	02 Seattle 72.1	03 New York Metro 67.3	04 Toronto 66.9	05 Austin 66.0	06 Washington, D.C. 65.2	07 Boston 63.7	08 Denver 62.3	09 Dallas-Ft. Worth 61.1	10 Ottawa 57.1
11 Vancouver 56.0	12 Salt Lake City 56.0	13 Atlanta 56.0	14 Los Angeles-Orange County 54.1	15 Montreal 53.5	16 Raleigh-Durham 52.9	17 San Diego 51.7	18 Waterloo Region 51.2	19 Phoenix 51.1	20 Calgary 49.6
21 Baltimore 49.0	22 Detroit 48.1	23 Chicago 46.7	24 Philadelphia 45.5	25 Minneapolis-St. Paul 45.2	26 Charlotte 44.8	27 South Florida 44.0	28 Portland 43.6	29 Madison 42.9	30 Tampa 42.4
31 Houston 40.4	32 Orlando 40.3	33 Kansas City 39.8	34 Columbus 38.2	35 Pittsburgh 38.0	36 St. Louis 37.6	37 Nashville 34.8	38 Sacramento 32.9	39 Indianapolis 32.2	40 Quebec City 31.6
41 San Antonio 30.8	42 Jacksonville 30.1	43 Hartford 29.4	44 Cincinnati 29.0	45 Cleveland 26.5	46 Richmond 24.7	47 Virginia Beach 23.9	48 Milwaukee 23.1	49 Edmonton 21.1	50 Inland Empire 17.2

Source: CBRE Research, CBRE Econometric Advisors, U.S. Bureau of Labor Statistics, Statistics Canada, Oxford Economics, The National Center of Education Statistics, National Science Foundation, Axiometrics, 2024.

As companies across all industries use more technology, there is high demand for tech talent in both large and small markets. Major gateway markets dominate overall tech talent growth because of their size. These and other markets with tech talent labor pools of more than 50,000 workers are categorized as “large,” while those below this threshold are categorized as “small” (Figure 5).

Both large and small markets have their advantages: While large markets generally have a deeper pool of talent, small markets typically offer business and cost-of-living savings. Between 2018 and 2023, Toronto added the most tech talent jobs (95,900), followed by the San Francisco Bay Area (68,610) and Dallas-Ft. Worth (46,380). Markets with the highest tech job growth rates were Calgary (78%), Ottawa (52%), the Waterloo Region (46%), Toronto (44%) and Vancouver (31%).

Tech talent concentration—the percentage of total employment—is an influential factor in how “tech” the market is and in its growth potential. Tech talent comprises 12.3% of total employment in both Ottawa and the San Francisco Bay Area—the highest concentrations and more than double the 50-market average of 5.5%. Toronto (10.1%), the Waterloo Region (9.6%) and Seattle (9.4%) rounded out the top five most concentrated markets for tech talent as a share of total employment.

Between 2018 and 2023, Toronto added the most tech talent jobs, followed by the San Francisco Bay Area and Dallas-Ft. Worth.

Figure 5: Tech Talent Workforce by Market (2023)

Market	Tech Talent Total	% Change (2018-2023)	By Volume (2018-2023)	Concentration (2023)
Large Tech Talent Markets (> 50,000 Workforce)				
SF Bay Area	436,740	18.6%	68,610	12.3%
New York Metro	389,290	6.1%	22,290	4.1%
Toronto	314,100	44.0%	95,900	10.1%
Washington, D.C.	260,430	-6.8%	(19,000)	8.4%
Los Angeles-Orange Co.	258,640	12.6%	28,950	4.0%
Dallas-Ft. Worth	227,640	25.6%	46,380	5.7%
Seattle	195,390	20.4%	33,140	9.4%
Boston	169,830	1.5%	2,580	6.1%
Montreal	166,600	30.3%	38,700	7.8%
Chicago	160,790	-9.5%	(16,790)	3.6%
Atlanta	138,080	-7.1%	(10,550)	4.9%
Denver	129,040	12.6%	14,420	6.8%
Houston	113,850	7.3%	7,700	3.6%
Phoenix	108,380	17.2%	15,890	4.7%
Philadelphia	105,930	-8.5%	(9,870)	3.7%
Austin	99,460	29.1%	22,390	8.1%
Vancouver	98,700	30.7%	23,200	7.4%
Detroit	97,720	-3.0%	(2,980)	4.6%
Minneapolis-St. Paul	94,020	-5.1%	(5,080)	4.9%
Ottawa	91,500	51.7%	31,200	12.3%
South Florida	80,650	13.9%	9,870	2.8%
San Diego	80,400	3.2%	2,530	5.3%
Baltimore	75,200	-6.1%	(4,900)	5.8%
Raleigh-Durham	75,150	17.9%	11,390	7.2%
Charlotte	71,050	19.3%	11,510	5.4%

Market	Tech Talent Total	% Change (2018-2023)	By Volume (2018-2023)	Concentration (2023)
Portland	70,220	9.4%	6,030	5.8%
Tampa	59,650	14.9%	7,750	4.2%
Calgary	59,500	78.1%	26,100	7.7%
Salt Lake City	57,560	12.9%	6,590	5.2%
St. Louis	53,780	-6.6%	(3,780)	4.1%
Kansas City	52,420	-6.3%	(3,530)	4.9%
Small Tech Talent Markets (< 50,000 Workforce)				
Orlando	49,570	12.9%	5,660	3.6%
Columbus	49,560	-5.3%	(2,760)	4.2%
Sacramento	42,390	2.0%	820	4.0%
Nashville	40,190	28.9%	9,020	3.7%
Cincinnati	39,880	-1.4%	(550)	3.7%
Pittsburgh	39,580	-20.0%	(9,900)	3.7%
Indianapolis	39,100	-1.4%	(550)	3.6%
Cleveland	37,850	-0.3%	(110)	3.8%
San Antonio	36,970	9.8%	3,290	3.4%
Milwaukee	34,160	2.5%	840	4.2%
Quebec City	33,500	13.9%	4,100	8.1%
Edmonton	33,400	24.2%	6,500	4.5%
Virginia Beach	30,580	0.4%	120	4.1%
Waterloo Region	29,100	45.5%	9,100	9.6%
Hartford	28,430	3.7%	1,020	5.0%
Richmond	28,290	1.2%	330	4.4%
Inland Empire	28,090	27.3%	6,030	1.7%
Jacksonville	24,960	5.8%	1,370	3.4%
Madison	23,950	-1.2%	(280)	6.0%

Source: U.S. Bureau of Labor Statistics (Metro) April 2024, Statistics Canada (Metro), 2024.

Figure 6: Tech Talent Workforce by Industry (2023)

Market	Tech Talent Total	% Tech Talent in Tech Industry*	Second Highest Tech Talent Industry*
Large Tech Talent Markets (> 50,000 Workforce)			
SF Bay Area	436,740	66.1%	FIRE (6.2%; 27,182)
Seattle	195,390	66.1%	Manuf (6.1%; 14,341)
Vancouver	98,700	51.1%	Prof Services (9.5%; 9,400)
Austin	99,460	50.7%	FIRE (8.8%; 10,605)
Raleigh-Durham	75,150	49.9%	FIRE (14.6%; 9,917)
Portland	70,220	45.6%	Prof Services (9.5%; 6,895)
Salt Lake City	57,560	44.7%	FIRE (14.7%; 8,612)
Montreal	166,600	44.4%	Other (10.3%; 17,100)
Boston	169,830	44.3%	FIRE (11.9%; 19,702)
Toronto	314,100	43.6%	FIRE (19.2%; 60,400)
Calgary	59,600	43.5%	Other (16.9%; 10,100)
San Diego	80,400	42.0%	Prof Services (12.3%; 11,314)
Denver	129,040	41.9%	FIRE (9.4%; 8,919)
Los Angeles-Orange Co.	258,640	39.7%	FIRE (9.6%; 22,987)
Atlanta	138,080	39.5%	FIRE (10.0%; 17,670)
Dallas-Ft. Worth	227,640	39.0%	FIRE (16.7%; 40,224)
Minneapolis-St. Paul	94,020	37.6%	FIRE (13.7%; 13,876)
Kansas City	52,420	37.5%	FIRE (12.7%; 7,130)
Washington, D.C.	260,430	36.9%	Govt (20.7%; 65,912)
New York Metro	389,290	36.0%	FIRE (20.0%; 95,172)
Houston	113,850	35.8%	FIRE (11.0%; 14,014)
Phoenix	108,380	34.4%	FIRE (19.3%; 21,225)
South Florida	80,650	34.4%	FIRE (13.7%; 11,369)
Ottawa	91,500	34.3%	Govt (36.6%; 33,500)
Baltimore	75,200	33.8%	Govt (25.3%; 27,466)

Market	Tech Talent Total	% Tech Talent in Tech Industry*	Second Highest Tech Talent Industry*
Tampa	59,650	33.6%	FIRE (15.9%; 11,988)
Charlotte	71,050	31.2%	FIRE (26.7%; 17,826)
Philadelphia	105,930	30.4%	FIRE (16.9%; 26,617)
Chicago	160,790	30.2%	FIRE (17.7%; 38,729)
Detroit	97,720	29.8%	Manuf (23.7%; 23,551)
St. Louis	53,780	29.5%	FIRE (15.6%; 11,454)
Small Tech Talent Markets (> 50,000 Workforce)			
Madison	23,950	56.6%	FIRE (11.0%; 2,940)
Waterloo Region	29,100	49.7%	FIRE (14.0%; 4,100)
San Antonio	36,970	36.8%	FIRE (14.2%; 6,867)
Edmonton	33,400	36.8%	Govt (14.4%; 4,800)
Inland Empire	28,090	36.6%	Govt (10.5%; 5,086)
Milwaukee	34,160	36.5%	Manuf (15.2%; 6,708)
Indianapolis	39,100	35.8%	FIRE (14.6%; 6,355)
Pittsburgh	39,580	35.2%	FIRE (12.6%; 7,439)
Hartford	28,430	34.1%	FIRE (25.3%; 6,281)
Jacksonville	24,960	34.1%	FIRE (19.5%; 6,936)
Cincinnati	39,880	33.1%	FIRE (12.5%; 6,031)
Nashville	40,190	31.7%	Health (14.0%; 6,734)
Orlando	49,570	31.0%	Prof Services (14.7%; 9,240)
Sacramento	42,390	30.1%	Govt (31.4%; 19,008)
Columbus	49,560	28.9%	FIRE (27.0%; 15,506)
Quebec City	33,500	28.7%	FIRE (25.7%; 8,600)
Richmond	28,290	28.1%	FIRE (23.7%; 8,448)
Cleveland	37,850	27.2%	FIRE (16.2%; 6,223)
Virginia Beach	30,580	26.7%	Govt (13.7%; 6,267)

Tech talent concentration by industry is another influential factor in attracting tech employers. While many technical skills are transferable across industries, specific industry experience can help to enhance innovation. In both the U.S. and Canada, 40% of tech talent works within the tech industry. By market, this concentration varies considerably even though the tech industry was the largest tech talent employer in all but two of the top 50 markets. The San Francisco Bay Area, Seattle and Vancouver had the highest concentrations of tech talent within the tech industry (Figure 6), while Virginia Beach, Cleveland and Richmond had the lowest.

Certain markets had high concentrations of tech talent in non-tech industries, including government in both Ottawa (37%) and Sacramento (31%). Columbus (27%), Charlotte (27%), Quebec City (26%) and Hartford (25%) had relatively high concentrations of tech talent in finance, insurance & real estate.

40%

Percentage of tech talent in the U.S. and Canada working in the tech industry

37%

Ottawa concentration of tech talent in government, the highest non-tech industry in this report

Source: U.S. Bureau of Labor Statistics (Metro), Statistics Canada (Metro), CBRE Research, IPUMS, April 2024. *2022 data

Note: Tech industry does not have the highest percentage of employment in Ottawa and Sacramento. FIRE is an acronym for the finance, insurance and real estate industries.

Traditionally, tech companies often based location decisions on which markets had the most available tech workers. Today, tech employers are more interested in attracting people with specific tech skills, which often command higher wages. This poses a challenge for non-tech employers when recruiting tech workers. Tech companies pay wages about 17% above the U.S. average and have more workers earning over \$150,000 per year than other industries (Figure 7).

Average tech talent wages are highest in the San Francisco Bay Area and Seattle, and lowest in San Antonio, Virginia Beach and Kansas City (Figure 8).



Figure 7: Average Annual Wage for U.S. Tech Talent by Industry (2022)

Industry	Average Annual Wage	Share with \$150,000+ Annual Wage
High-Tech (Includes computer software & services and computer product manufacturing)	\$109,651	23.6%
FIRE (Finance, Insurance & Real Estate)	\$102,005	16.6%
Professional Services (Excluding High-Tech)	\$91,772	16.4%
Manufacturing (Excluding High-Tech)	\$89,047	13.3%
Government	\$80,670	6.1%
Health Care	\$75,709	2.7%
All Industries	\$94,024	16.0%

Source: U.S. Census, IPUMS, CBRE Research, April 2024.

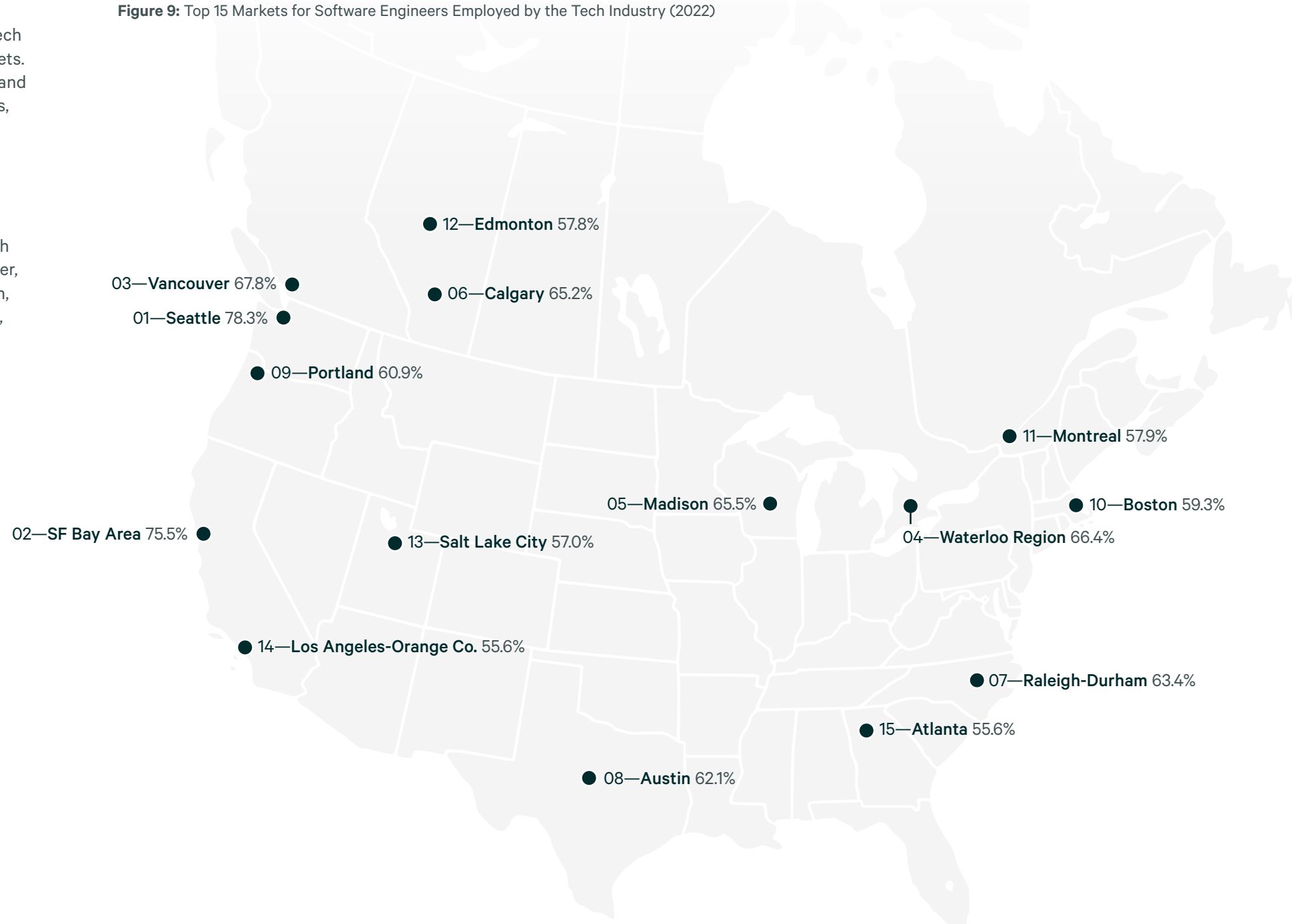
Figure 8: Average Annual Wage for U.S. Tech Talent Employed by the Tech Industry (2022)

Market	Average Annual Wage	Market	Average Annual Wage
Large Tech Talent Markets (> 50,000 Workforce)		Small Tech Talent Markets (< 50,000 Workforce)	
SF Bay Area	\$192,969	Madison	\$107,236
Seattle	\$176,189	Pittsburgh	\$103,849
Portland	\$124,190	Sacramento	\$100,938
Boston	\$121,132	Jacksonville	\$97,405
Austin	\$119,983	Richmond	\$93,115
New York Metro	\$118,490	Columbus	\$87,482
Washington, D.C.	\$110,626	Indianapolis	\$87,429
Los Angeles-Orange Co.	\$109,059	Hartford	\$86,509
San Diego	\$107,005	Inland Empire	\$85,080
Raleigh-Durham	\$106,900	Milwaukee	\$84,587
South Florida	\$100,036	Orlando	\$83,889
Chicago	\$98,513	Cincinnati	\$80,228
Phoenix	\$97,977	Cleveland	\$80,097
Charlotte	\$97,044	Nashville	\$79,314
Denver	\$96,746	Virginia Beach	\$68,613
Minneapolis-St. Paul	\$96,710	San Antonio	\$67,144
Tampa	\$96,559		
Dallas-Ft. Worth	\$96,521		
Atlanta	\$94,151		
Detroit	\$91,377		
Baltimore	\$91,289		
Philadelphia	\$89,299		
Salt Lake City	\$87,984		
Houston	\$83,770		
St. Louis	\$81,654		
Kansas City	\$78,219		

Source: U.S. Census, IPUMS and CBRE Research, April 2024.

Software engineers are also highly concentrated in the tech industry and in certain markets. In the U.S. and Canada, 52% and 58% of all software engineers, respectively, work within the tech industry. Seattle (78%) and the San Francisco Bay Area (76%) had the highest concentration of software engineers working in the tech industry (Figure 9). Vancouver, the Waterloo region, Madison, WI, Calgary, Raleigh-Durham, Austin and Portland had concentrations above 60%.

Figure 9: Top 15 Markets for Software Engineers Employed by the Tech Industry (2022)



Market	Software Engineers in Tech Industry
Seattle	78.3%
SF Bay Area	75.5%
Vancouver	67.8%
Waterloo Region	66.4%
Madison	65.5%
Calgary	65.2%
Raleigh-Durham	63.4%
Austin	62.1%
Portland	60.9%
Boston	59.3%
Montreal	57.9%
Edmonton	57.8%
Salt Lake City	57.0%
Los Angeles-Orange Co.	55.6%
Atlanta	55.6%
U.S.	52.0%
Canada	57.5%

Source: U.S. Census, IPUMS, Statistics Canada, CBRE Research, April 2024.

03

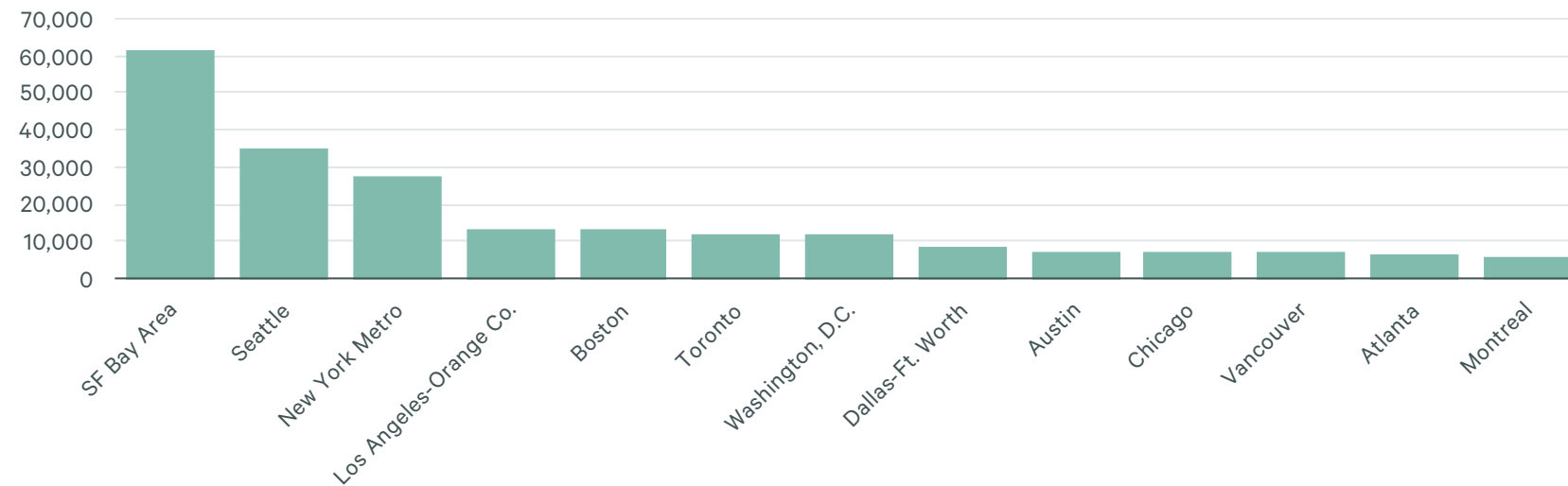
Which markets have
the most Tech Talent
specializing in Artificial
Intelligence?

Artificial intelligence is a transformative technology with high potential to become a major source of economic growth and real estate demand.

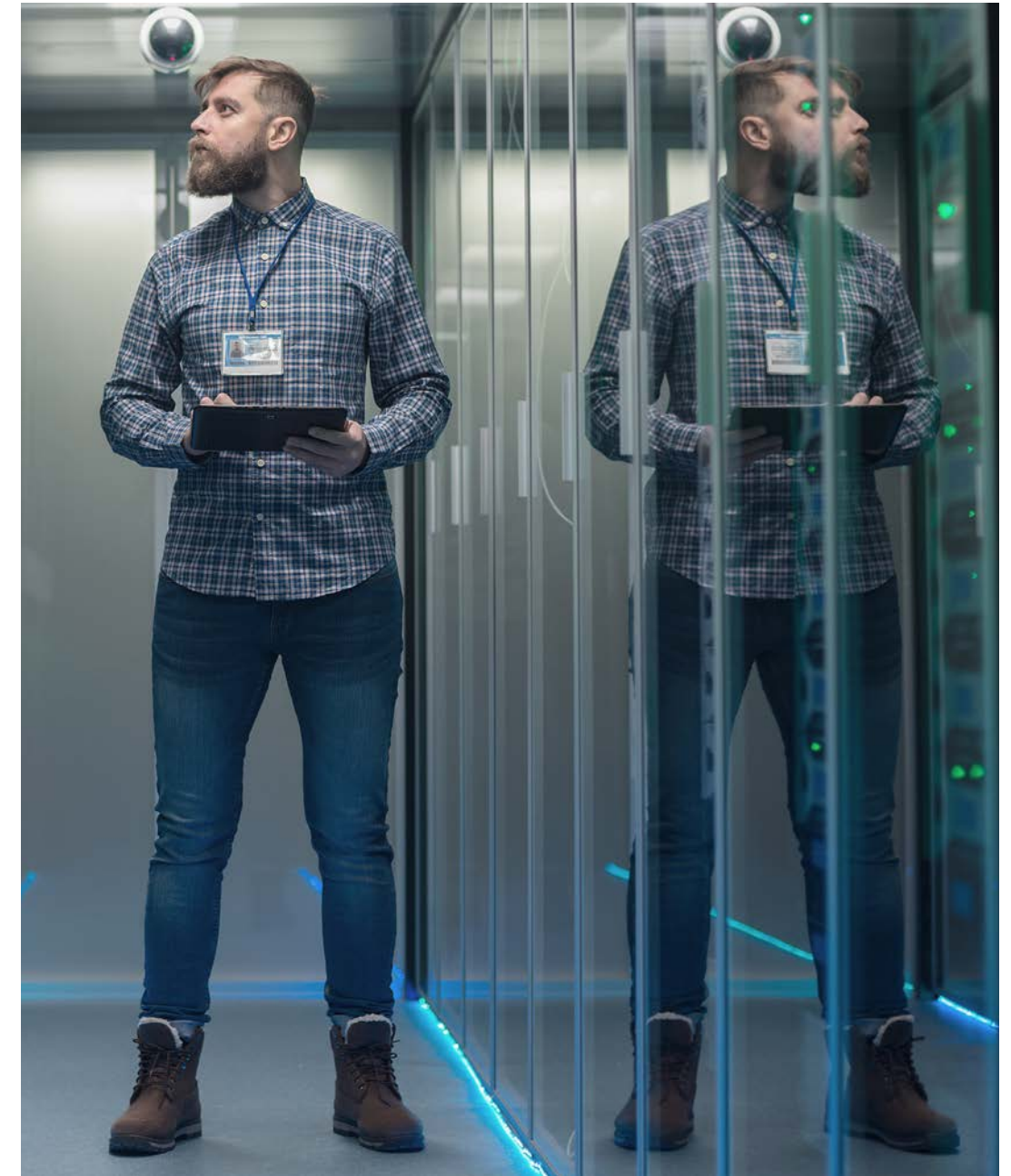
This technology enables computers and machines to simulate human intelligence using algorithms, data and computational power. Tasks such as learning, reasoning, problem-solving, perception and language understanding will be revolutionized. The deployment of these AI systems across industries could be a catalyst for business and workforce growth, much like mobile internet technology was after the 2007-2008 financial crisis.

AI software and hardware developers currently are the most sought-after tech talent by employers. Across the U.S. and Canada, there are about 325,000 tech talent workers possessing AI skills. The San Francisco Bay Area, Seattle and New York Metro have the most AI-specialty talent, accounting for 44% of the U.S. total (Figure 10). Toronto, Vancouver and Montreal were the top Canadian markets with 60% of the country's total AI-specialty talent.

Figure 10: U.S. & Canada Artificial Intelligence Tech Talent By Market



Source: LinkedIn Talent Insights, CBRE Consulting, June 2024.
 Note: Based on LinkedIn members who self-reported their occupation as tech talent with artificial intelligence and machine learning skills.



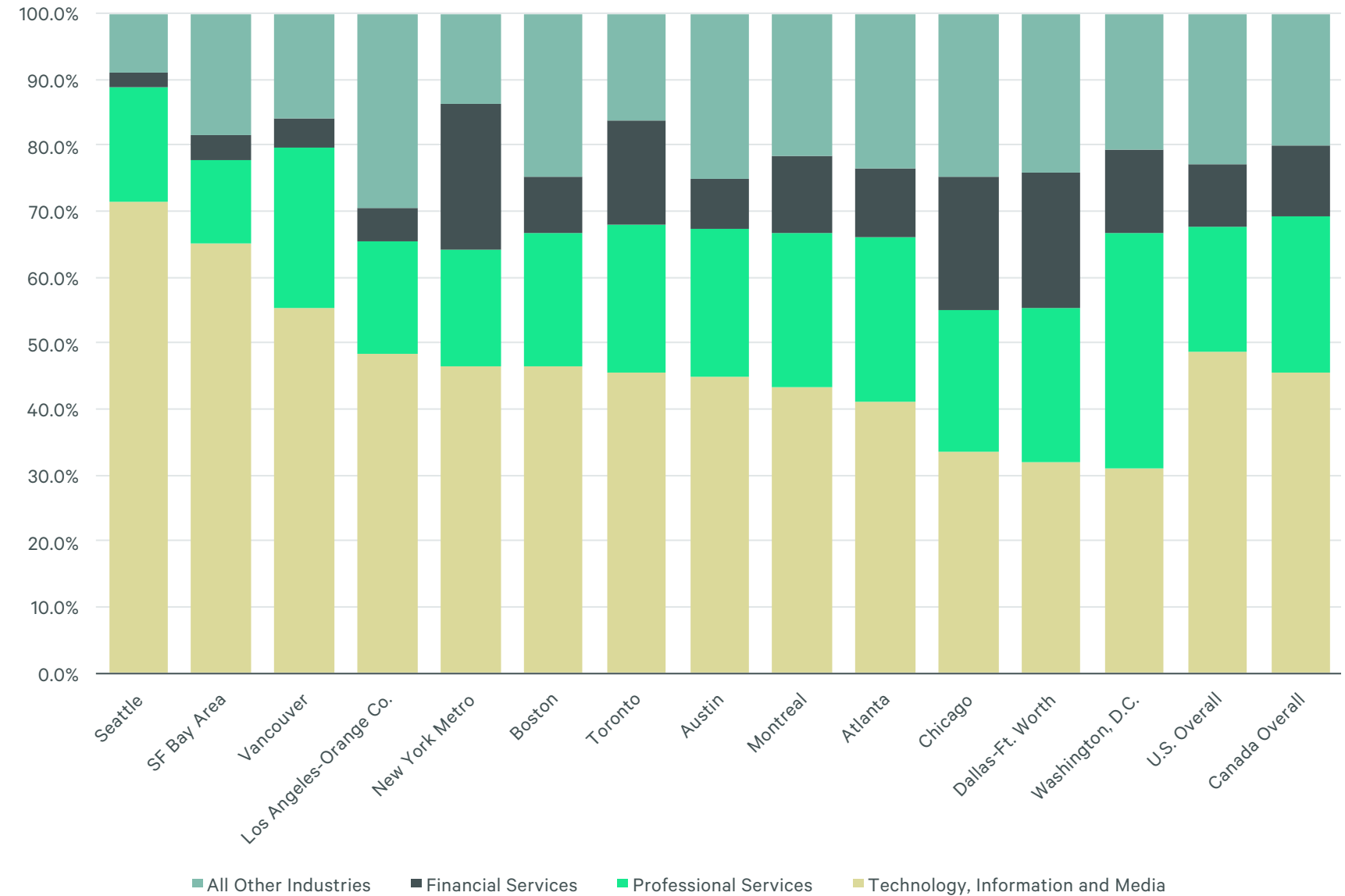
The tech industry employed 48% of total AI-specialty talent in the U.S. and 46% in Canada—the most in each country. Professional & business services and financial services were the next highest industries with less than half the tech industry’s share (Figure 11). By market, Seattle (71%) and the San Francisco Bay Area (65%) had the highest shares of AI-specialty talent working for tech companies, followed by Vancouver (55%). Los Angeles, New York Metro, Boston, Toronto and Austin each had 45% or more of AI-specialty talent in the tech industry. New York Metro was the only market where AI-specialty talent in financial services (22%) exceeded professional & business services (18%).

The most significant indicators for any market’s potential growth of AI-specialty talent are the presence of universities with established AI education programs, major technology companies developing AI and available venture capital funding. The San Francisco Bay Area dominates for these indicators, attracting more than half of U.S. AI venture capital funding, most of the country’s largest start-up AI companies and two of the top five university AI programs, according to U.S. News & World Report. Seattle, New York Metro, Boston, Los Angeles, Toronto and Washington, D.C. also have many of these growth indicators.

Existing tech talent workforces are rapidly upskilling to include AI development skills as companies across all industries deploy this new technology. Thus, AI-skilled tech talent will remain in high demand.

The most significant indicators for any market’s potential growth of AI-specialty talent are the presence of universities with established AI education programs, major technology companies developing AI and available venture capital funding.

Figure 11: U.S. & Canada Artificial Intelligence Tech Talent by Industry



Source: LinkedIn Talent Insights, CBRE Consulting, June 2024.
 Note: Based on LinkedIn members who self-reported their occupation as tech talent with artificial intelligence and machine learning skills.

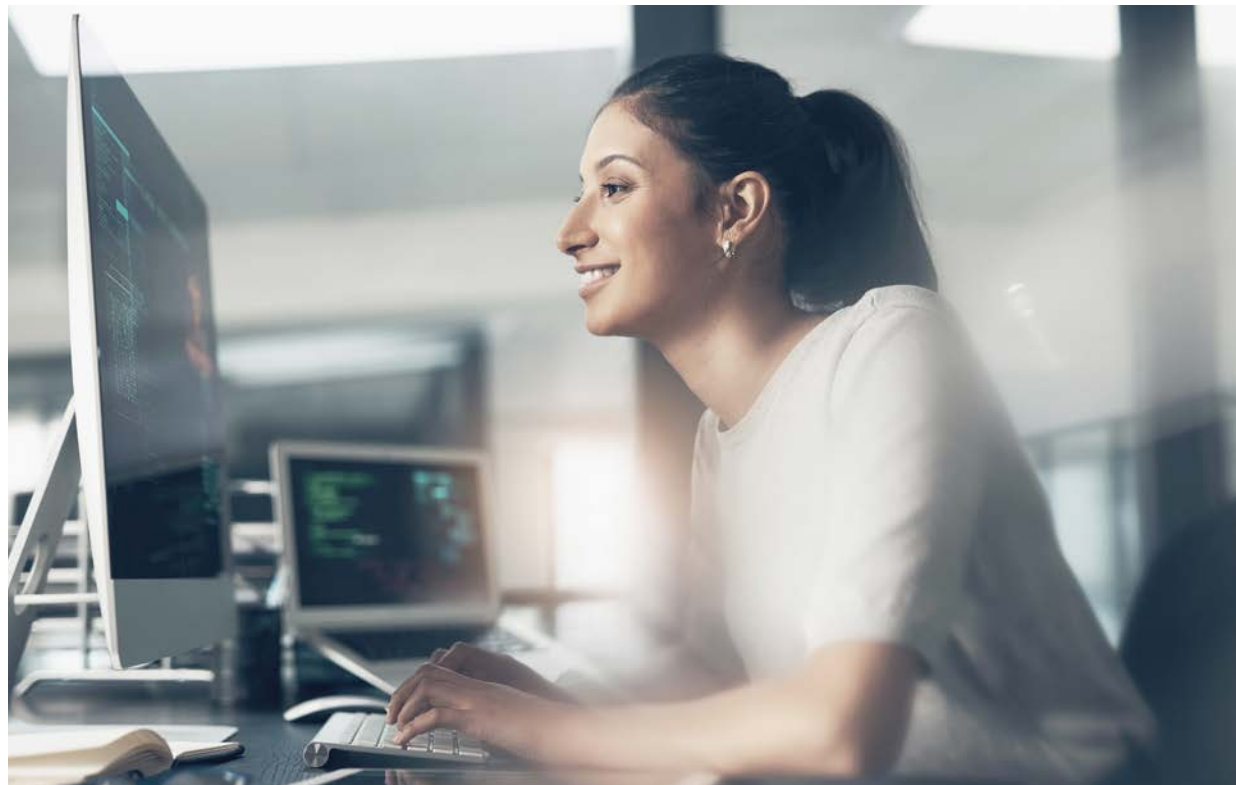
04

What defines a Tech Talent market?

Two key characteristics of top tech talent markets are high educational attainment and high concentrations of young people.

Forty-two of the top 50 tech talent markets have a metro-level educational attainment rate above their national averages of 35.7% in the U.S. and 32.2% in Canada. The top 10 markets have 44% or more of residents over 25 years old with a bachelor’s degree or higher (Figure 12). Washington, D.C., the San Francisco Bay Area and Austin have rates of 52% or more.

Education, particularly with a focus on technology,² is best analyzed through degrees issued by higher educational institutions. Metro areas that produced the most tech graduates last year with bachelor’s or higher degrees were New York Metro, Los Angeles-Orange County, Boston, Washington, D.C. and the San Francisco Bay Area (Figure 13). Large tech talent markets dominate the top 10 degree-granting regions. Demand is high for tech-related education. Between 2017 and 2022, U.S. tech-related degrees grew by 75,500. This analysis provides insight into which markets produce the most tech talent entering the labor pool each year.



² Tech degree fields include computer engineering & information sciences, mathematics & statistics, electrical & electronics engineering and, mechanical & industrial engineering.

Figure 12: Top 10 Markets for Educational Attainment* (2022)

Market	Educational Attainment Rate
Washington, D.C.	53.1%
SF Bay Area	52.7%
Austin	52.1%
Boston	51.4%
Denver	50.7%
Madison	50.5%
Raleigh	49.6%
Seattle	45.3%
Toronto	44.6%
Baltimore	44.4%
U.S.	35.7%
Canada	32.2%

Source: U.S. Census Bureau (Metro), Environics Analytics, April 2024.
* Population age 25+ with a bachelor’s degree or higher.

Figure 13: Top 10 Markets for Tech Degree Completions

Market	Tech Degree Completions (2022)	Growth (2017-2022)
New York Metro	20,848	-8.2%
Los Angeles-Orange Co.	14,467	-3.7%
Boston	14,175	2.7%
Washington, D.C.	13,043	-4.7%
SF Bay Area	9,873	-0.9%
Atlanta	9,692	6.5%
Salt Lake City	8,841	2.7%
Chicago	8,227	-6.9%
Toronto	7,994	44.1%
Dallas-Ft. Worth	6,814	-6.6%

Source: The National Center for Education Statistics (Region), Canadian Universities, April 2024.
Note: bachelor’s degree or higher.

Many graduates do not stay in the market where they earn their degree; they often move to markets that offer the most job opportunities or have the best pay. Analyzing tech-related graduation data and tech-related employment growth identifies tech talent flow between where workers are employed and where they were educated (Figure 14). Tech degrees cover the most recent five-year period available (2018-2022) and tech talent jobs added cover the period when most graduates would be counted in employment figures (2019-2023). The standout markets for tech talent job creation were Toronto (61,057), Calgary (21,557) and the San Francisco Bay Area (20,221). Other top tech talent job creators were Ottawa, Dallas-Ft. Worth and Montreal. The top education markets—those with more tech degree graduates than tech talent jobs—were New York Metro, Washington, D.C., Boston, Chicago, Atlanta, Greater Los Angeles-Orange County and Philadelphia.

Thirty-seven markets had more tech degree graduates than new tech talent jobs. This implies a dispersion of tech talent hiring, as the national tech talent workforce has grown year-over-year. This may be attributable to increased remote work opportunities.

Software engineering is the most coveted skill by tech employers. From 2022 to 2023, more than 154,000 new software engineering jobs were created in the U.S. versus 189,000 university graduates specializing in software engineering. This shortfall in software engineering degree graduates encouraged upskilling of the existing workforce and some international immigration to meet the demand. In Canada, international immigration has played a much larger role in fulfilling tech talent needs.

Figure 14: Tech Degrees vs. Tech Jobs Added by Market

Market	Tech Degrees (2018-2022)*	Tech Jobs Added (2019-2023)*	Jobs Minus Degrees
Toronto	34,843	94,900	61,057
Calgary	4,543	26,100	21,557
SF Bay Area	48,389	68,610	20,221
Ottawa	11,296	31,200	19,904
Dallas-Ft. Worth	34,506	46,380	11,874
Montreal	27,871	38,700	10,829
Seattle	24,606	33,140	8,534
Austin	14,340	22,390	8,050
Vancouver	16,262	23,200	6,938
Nashville	5,613	9,020	3,407
Charlotte	8,783	11,510	2,727
Québec City	2,409	4,100	1,691
Portland	5,509	6,030	521
New York Metro	107,403	22,290	-85,113
Washington, D.C.	64,587	-19,000	-83,587
Boston	64,163	2,580	-61,583
Chicago	43,112	-16,790	-59,902
Atlanta	42,286	-10,550	-52,836
Los Angeles-Orange Co.	71,836	28,950	-42,886
Philadelphia	31,542	-9,870	-41,412
Pittsburgh	26,351	-9,900	-36,251
Detroit	32,990	-2,980	-35,970
Salt Lake City	34,750	6,590	-28,160
Baltimore	21,007	-4,900	-25,907
Minneapolis-St. Paul	18,970	-5,080	-24,050
San Diego	24,765	2,530	-22,235
Columbus	12,731	-2,760	-15,491
St. Louis	11,363	-3,780	-15,143
Phoenix	28,592	15,890	-12,702
Cincinnati	11,181	-550	-11,731
Madison	11,312	-280	-11,592
Sacramento	11,305	820	-10,485
Raleigh-Durham	21,215	11,390	-9,825
Orlando	15,203	5,660	-9,543
Waterloo Region	18,250	9,100	-9,150
Virginia Beach	8,560	120	-8,440
Kansas City	4,189	-3,530	-7,719
Hartford	8,491	1,020	-7,471
Indianapolis	6,638	-550	-7,188
Denver	21,521	14,420	-7,101
Houston	14,287	7,700	-6,587
Milwaukee	7,221	840	-6,381
Cleveland	6,035	-110	-6,145
South Florida	14,969	9,870	-5,099
San Antonio	7,023	3,290	-3,733
Richmond	3,777	330	-3,447
Tampa	9,213	7,750	-1,463
Inland Empire	7,488	6,030	-1,458
Jacksonville	2,252	1,370	-882
Edmonton	6,973	6,500	-473

Top Job Markets



Top Education Markets



Source: CBRE Research, U.S. Bureau of Labor Statistics, National Center for Education Statistics (Metro), Canadian Universities, 2024.

* Tech degrees cover the most recent five-year period available (2018-2022) and tech jobs added cover the time period reflecting when most graduates would be counted in employment figures (2019-2023).

The number and concentration of people in their 20s and 30s, which drives workforce growth and innovation, is another notable characteristic of top tech talent markets. Those in their 30s are the largest demographic cohort in the workforce, while those in their 20s will fuel future growth (Figures 15 and 16).

There were six markets with fast growing populations in their 20s and 18 markets with those in their 30s, both with increases of more than 10% from 2017 to 2022. The Waterloo Region had the most overall growth for residents in their 20s at 29%, followed by Toronto (13%), Austin (13%) and Salt Lake City (12%). Among the largest tech talent markets, Vancouver and Austin led with 18% growth of those in their 30s, while Waterloo and Jacksonville led the smallest markets with 20% and 19%, respectively.

Growth rates were much higher for degree-holders in their 20s and 30s. All but four U.S. markets saw degree-holders in their 20s increase from 2017 to 2022, with 10% aggregate growth for the 42 U.S. markets. Degree-holders in their 30s grew in all but two markets during the same period, with 16% growth for the 42-market aggregate. For both age cohorts, tech talent markets were slightly below the U.S. averages of 13% growth for degree-holders in their 20s and 18% growth for those in their 30s (Figures 17 and 18).

29%

Waterloo Region
increase in residents
in their 20s

10%

Aggregate growth for
degree-holders in their
20s and 30s across 42
U.S. markets



Figure 15: Population Change of Those in Their 20s by Market, 2017-2022

Market	% Change	Market	% Change
Large Tech Talent Markets (> 50,000 Workforce)			
Toronto	13.1%	Philadelphia	-4.0%
Austin	12.5%	Los Angeles-Orange Co.	-5.4%
Salt Lake City	12.0%	South Florida	-7.4%
Charlotte	11.0%	Baltimore	-7.8%
Raleigh-Durham	10.8%	New York Metro	-10.0%
Vancouver	10.0%	San Diego	-10.1%
Dallas-Ft. Worth	9.0%	SF Bay Area	-11.8%
Ottawa	7.7%	Small Tech Talent Markets (< 50,000 Workforce)	
Phoenix	7.1%	Waterloo Region	29.2%
Atlanta	5.1%	Nashville	6.6%
Denver	4.4%	San Antonio	4.8%
Houston	4.2%	Indianapolis	4.5%
Tampa	4.2%	Madison	4.3%
Kansas City	3.4%	Orlando	3.2%
Calgary	0.9%	Jacksonville	2.8%
Seattle	0.3%	Cincinnati	2.2%
Montreal	0.0%	Hartford	1.8%
Minneapolis-St. Paul	-0.5%	Richmond	0.4%
Portland	-1.2%	Edmonton	-2.3%
Washington, D.C.	-2.0%	Sacramento	-2.4%
Columbus	-2.6%	Cleveland	-2.8%
Boston	-2.8%	Inland Empire	-2.8%
Detroit	-3.4%	Milwaukee	-2.8%
Chicago	-3.7%	Pittsburgh	-4.3%
St. Louis	-3.9%	Virginia Beach	-4.4%
		Quebec City	-4.8%



Source: U.S. Census Bureau (County), Statistics Canada (Metro), 2024.

Figure 16: Population Change of Those in Their 30s by Market, 2017-2022

Market	% Change	Market	% Change
Large Tech Talent Markets (> 50,000 Workforce)			
Vancouver	18.4%	Minneapolis-St. Paul	1.9%
Austin	18.2%	South Florida	1.4%
Raleigh-Durham	16.8%	Los Angeles-Orange Co.	0.7%
Toronto	16.4%	Chicago	-0.7%
Ottawa	15.1%	SF Bay Area	-1.5%
Tampa	14.6%	Washington, D.C.	-1.7%
Seattle	13.5%	New York Metro	-3.2%
Charlotte	13.2%	Small Tech Talent Markets (< 50,000 Workforce)	
Phoenix	10.3%	Waterloo Region	20.2%
Dallas-Ft. Worth	9.6%	Jacksonville	18.6%
Denver	9.1%	Orlando	13.8%
Philadelphia	8.6%	San Antonio	13.1%
Detroit	7.7%	Nashville	11.8%
Calgary	7.5%	Richmond	11.7%
Salt Lake City	6.2%	Pittsburgh	10.6%
Atlanta	6.1%	Sacramento	10.2%
Houston	5.5%	Edmonton	10.1%
Kansas City	5.2%	Cincinnati	9.3%
Portland	5.0%	Virginia Beach	8.4%
Boston	5.0%	Indianapolis	8.3%
San Diego	4.3%	Hartford	8.1%
Baltimore	4.2%	Inland Empire	6.9%
Columbus	3.7%	Cleveland	5.4%
Montreal	3.1%	Quebec City	3.0%
St. Louis	2.5%	Madison	1.1%
		Milwaukee	-1.3%

Source: U.S. Census Bureau (County), Statistics Canada (Metro), 2024.

Figure 17: Change in Residents in Their 20s with College Degrees for U.S. Markets, 2017-2022

Market	% Change	Market	% Change
Large Tech Talent Markets (> 50,000 Workforce)		San Diego	4.9%
Austin	41.7%	Washington, D.C.	3.1%
Orlando	40.0%	Portland	3.0%
Dallas-Ft. Worth	33.3%	New York Metro	1.8%
Phoenix	33.3%	Minneapolis-St. Paul	0.7%
Kansas City	29.6%	Columbus	-7.7%
Tampa	29.2%	SF Bay Area	-9.6%
Salt Lake City	24.8%	Small Tech Talent Markets (< 50,000 Workforce)	
Seattle	24.5%	San Antonio	27.3%
Charlotte	22.4%	Inland Empire	25.4%
Atlanta	20.5%	Jacksonville	22.0%
Detroit	19.1%	Sacramento	22.0%
Raleigh-Durham	18.9%	Nashville	18.0%
Baltimore	13.5%	Cleveland	16.1%
Philadelphia	13.3%	Milwaukee	15.7%
Denver	10.5%	Cincinnati	13.4%
Houston	10.3%	Madison	9.3%
Chicago	8.4%	Virginia Beach	6.1%
St. Louis	8.2%	Indianapolis	4.8%
Los Angeles-Orange Co.	7.1%	Richmond	1.9%
Boston	6.2%	Hartford	-4.2%
South Florida	5.4%	Pittsburgh	-8.9%

Source: U.S. Census Bureau (County), IPUMS, 2024.

All but four U.S. markets saw degree-holders in their 20s grow from 2017 to 2022, with 10% aggregate growth for the 42 U.S. markets.

Figure 18: Change in Residents in Their 30s with College Degrees for U.S. Markets, 2017-2022

Market	% Change	Market	% Change
Large Tech Talent Markets (> 50,000 Workforce)		Baltimore	10.5%
Austin	51.9%	Portland	10.3%
Tampa	40.1%	Chicago	10.3%
Orlando	38.7%	Columbus	9.7%
Seattle	27.6%	SF Bay Area	9.5%
Philadelphia	23.6%	St. Louis	6.9%
Raleigh-Durham	22.9%	Washington, D.C.	4.5%
Dallas-Ft. Worth	22.9%	Small Tech Talent Markets (< 50,000 Workforce)	
Phoenix	21.5%	Jacksonville	40.3%
Kansas City	19.4%	San Antonio	33.0%
Atlanta	18.7%	Richmond	28.7%
Houston	18.6%	Cincinnati	27.7%
San Diego	18.4%	Sacramento	20.6%
Detroit	16.3%	Virginia Beach	19.4%
Denver	16.0%	Cleveland	18.6%
Charlotte	15.8%	Nashville	16.4%
South Florida	15.0%	Inland Empire	15.4%
Salt Lake City	13.3%	Indianapolis	14.9%
Los Angeles-Orange Co.	12.5%	Pittsburgh	12.7%
Boston	11.8%	Milwaukee	4.6%
New York Metro	11.8%	Madison	-3.6%
Minneapolis-St. Paul	11.5%	Hartford	-15.8%

Source: U.S. Census Bureau (County), IPUMS, 2024.

Salt Lake City, the Waterloo Region and Madison, WI had the highest concentration of residents in their 20s, comprising about 18% of each market’s total population (Figure 19). Austin, Seattle and Calgary had the highest concentration of residents in their 30s (Figure 20).

Figure 19: Top 10 Most Concentrated Markets for Residents in Their 20s (2022)

Market	Population Concentration
Salt Lake City	17.7%
Waterloo Region	17.6%
Madison	17.0%
Virginia Beach	14.7%
Toronto	15.6%
San Diego	15.0%
Austin	15.2%
Vancouver	15.1%
Ottawa	14.2%
Columbus	13.8%

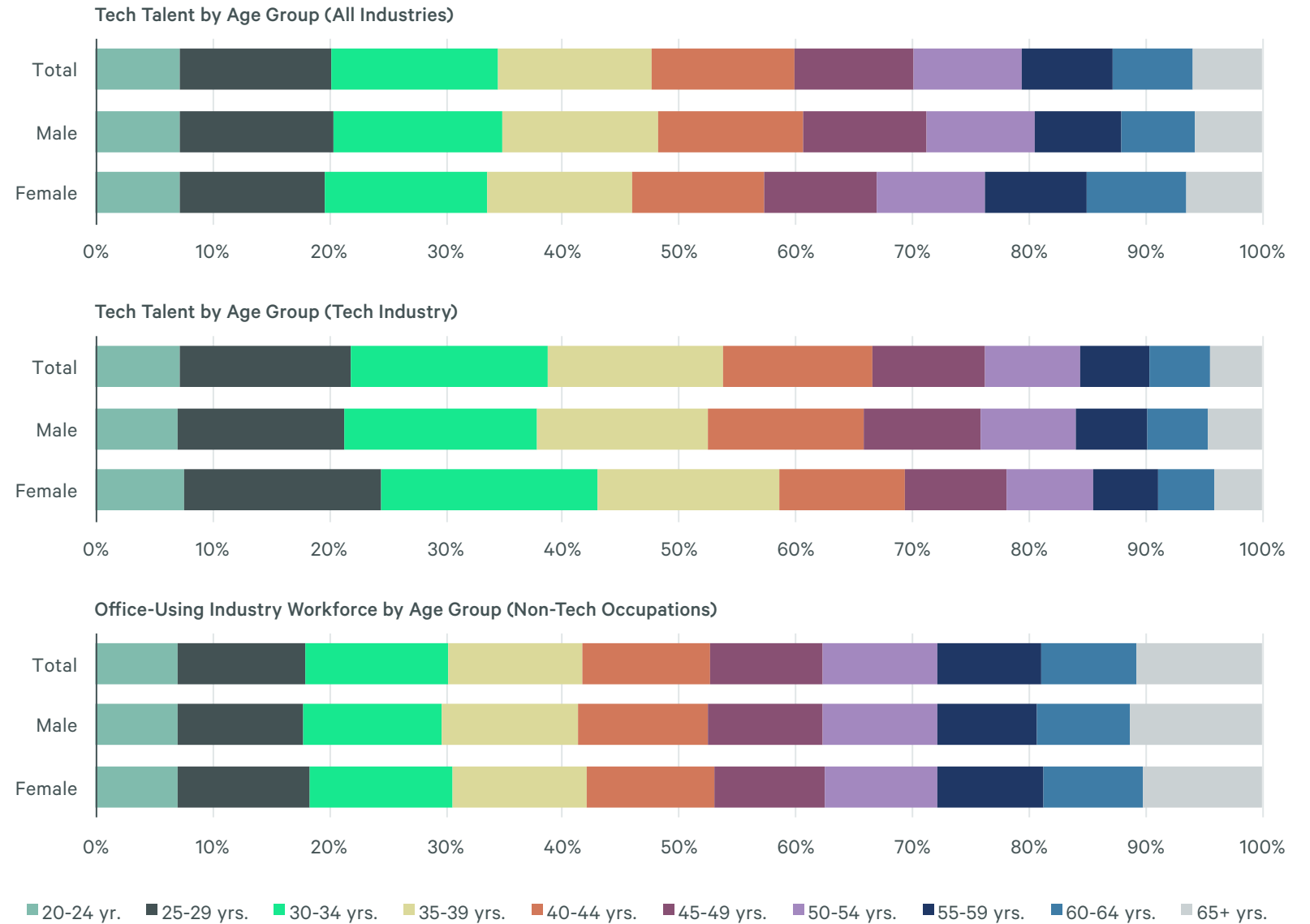
Figure 20: Top 10 Most Concentrated Markets for Residents in Their 30s (2022)

Market	Population Concentration
Austin	17.5%
Seattle	17.4%
Calgary	16.9%
Edmonton	16.9%
Denver	16.5%
Vancouver	16.3%
SF Bay Area	15.9%
Portland	15.8%
Toronto	15.7%
San Diego	15.5%

Source: U.S. Census Bureau (Metro), Statistics Canada (Metro), 2024.

People in their 20s and 30s account for 47.6% of the tech talent workforce across all industries in the U.S., compared with 41.7% for general office-using industries (Figure 21). Tech talent working within the tech industry has an even higher concentration at 53.7%. Older workers (age 55 and up) comprised 27.9% of the labor force for all office-using industries compared with 20.7% of tech talent working in all industries and 15.7% of tech talent working within the tech industry.

Figure 21: U.S. Workforce by Age for Certain Industries (2022)



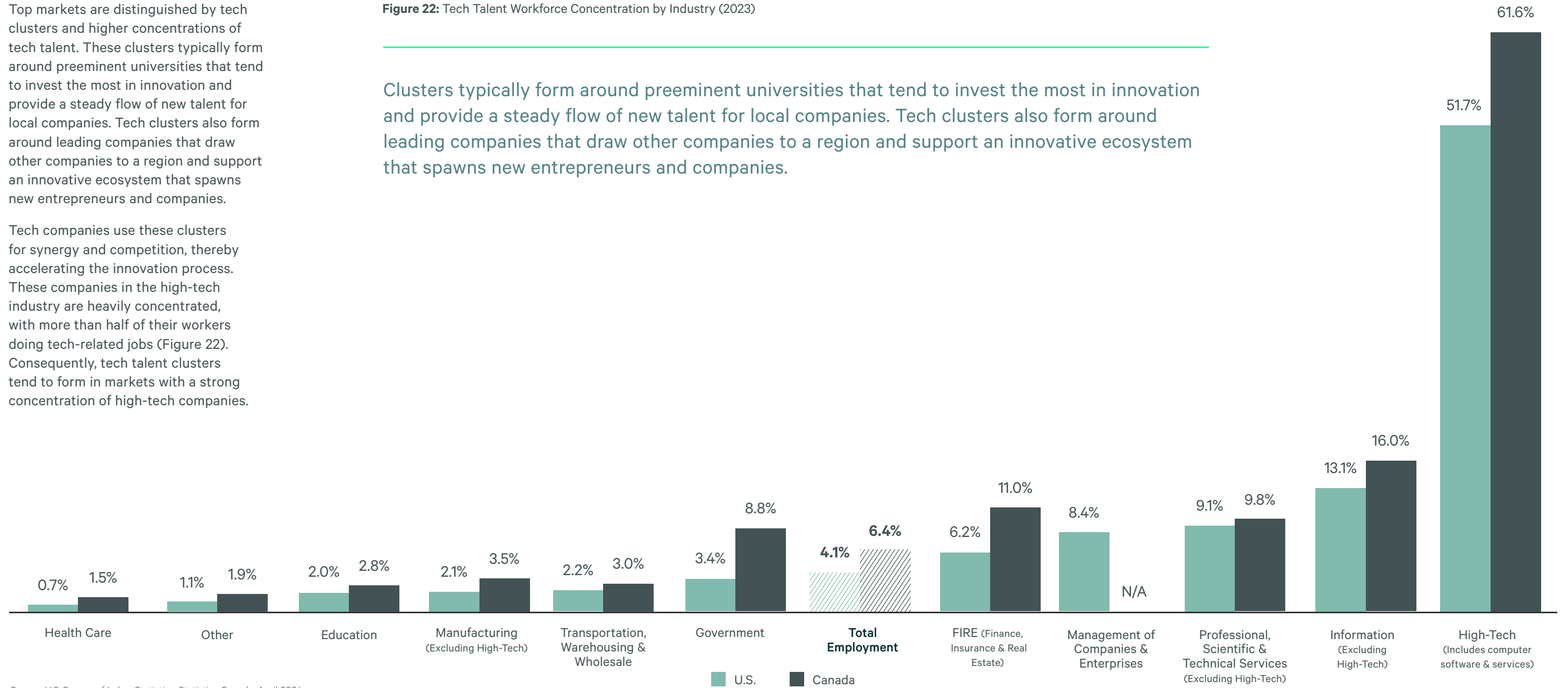
Source: U.S. Census, IPUMS, CBRE Research, April 2024.
 Note: Office-using includes occupations that are typically performed in an office setting (excluding tech talent).

Top markets are distinguished by tech clusters and higher concentrations of tech talent. These clusters typically form around preeminent universities that tend to invest the most in innovation and provide a steady flow of new talent for local companies. Tech clusters also form around leading companies that draw other companies to a region and support an innovative ecosystem that spawns new entrepreneurs and companies.

Tech companies use these clusters for synergy and competition, thereby accelerating the innovation process. These companies in the high-tech industry are heavily concentrated, with more than half of their workers doing tech-related jobs (Figure 22). Consequently, tech talent clusters tend to form in markets with a strong concentration of high-tech companies.

Figure 22: Tech Talent Workforce Concentration by Industry (2023)

Clusters typically form around preeminent universities that tend to invest the most in innovation and provide a steady flow of new talent for local companies. Tech clusters also form around leading companies that draw other companies to a region and support an innovative ecosystem that spawns new entrepreneurs and companies.



Source: U.S. Bureau of Labor Statistics, Statistics Canada, April 2024.

05

How diverse are Tech Talent markets?

Tech talent diversity by race/ethnicity and sex has improved slowly. Remote work and workforce analytics have created opportunities to increase diversity.

Strategic approaches to diverse team building can be enhanced by greater use of data and benchmarking analytics that identify where diverse talent is located and being developed. Our analysis details workforce race/ethnicity and sex by geography, industry, job classification and income bracket, as well as college tech degree graduates' race/ethnicity and sex by geography. Workforce diversity for these categories used office-using industries as the benchmark for comparison. If tech talent diversity was below this benchmark, there was underrepresentation.



Strategic approaches to diverse team building can be enhanced by greater use of data and benchmarking analytics that identify where diverse talent is located and being developed.

Industry Diversity

Tech talent across all industries was little changed over the past five years and remains predominantly White, Asian and male relative to total employment and office-using employment.³ U.S. Census Bureau data from 2022 shows that Hispanics, Blacks, other non-Whites, non-Asians and females were underrepresented (Figures 23 and 24). The Hispanic, Black and Other race/ethnicity categories combined accounted for 26.5% of the office-using workforce and only 23.1% of the tech talent workforce in the U.S. In Canada, underrepresented race/ethnicity groups have a small share of tech talent employment (10.2%) but exceed that of office-using industries (9.8%).

Figure 23A: U.S. Workforce by Race/Ethnicity for Selected Industries (2022)

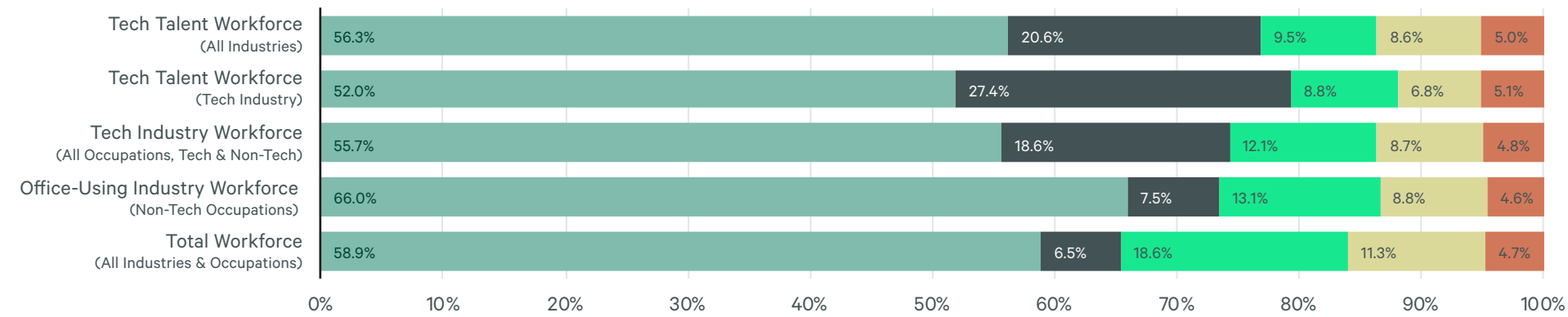
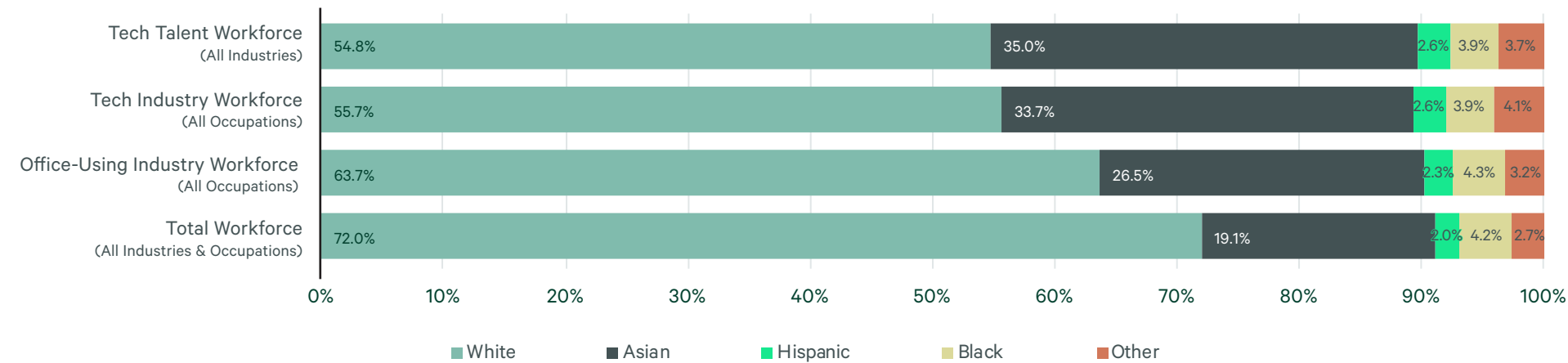
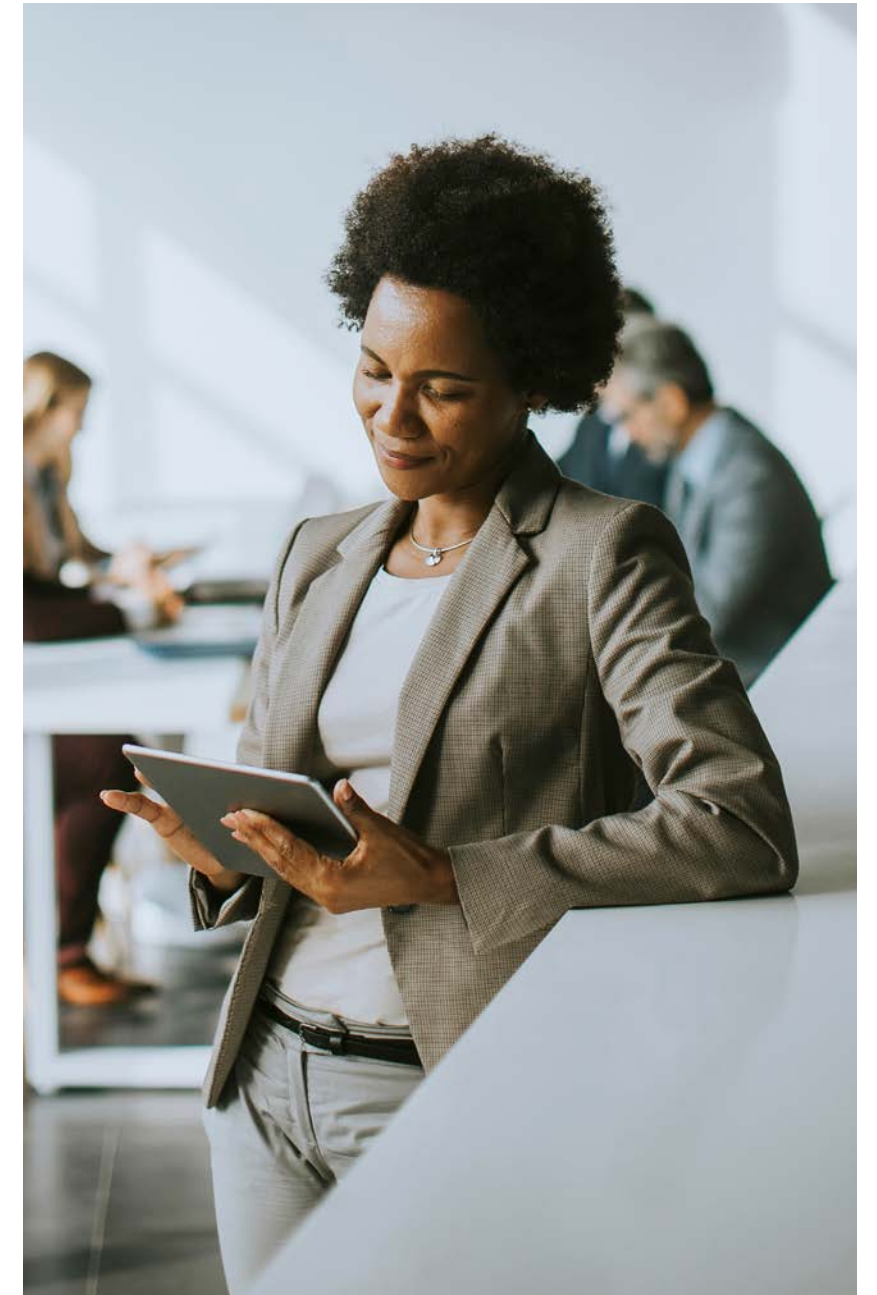


Figure 23B: Canada Workforce by Race/Ethnicity for Selected Industries (2022)



Source: U.S. Census, IPUMS, Statistics Canada, CBRE Research, April 2024. Note: Office-using includes occupations that are typically performed in an office setting.

³ Non-tech occupations in industries that heavily use office space for their operations, including information, professional & business services and financial activities.



Female Diversity

Females were the most underrepresented group within the tech talent workforce (Figure 24). Females comprised 24% of the tech talent workforce across all industries and 21% within the tech industry.

Females accounted for 33% of all occupations within the tech industry, below the 47% share for total employment and 50% share for the office-using workforce. Females within underrepresented race/ethnicity groups (Hispanic, Black and Other) had a higher share of jobs than White females in all five workforce categories.

White females had a lower share than Asians for tech talent overall and within the tech industry but had higher or similar shares in the three other categories. Black females had the highest share of jobs for all race/ethnicity groups and workforce categories.

In Canada, females comprised 22% of tech occupations within the tech industry and 24% across all industries. They were 49% of Canada's total workforce and 57% of the office-using workforce.

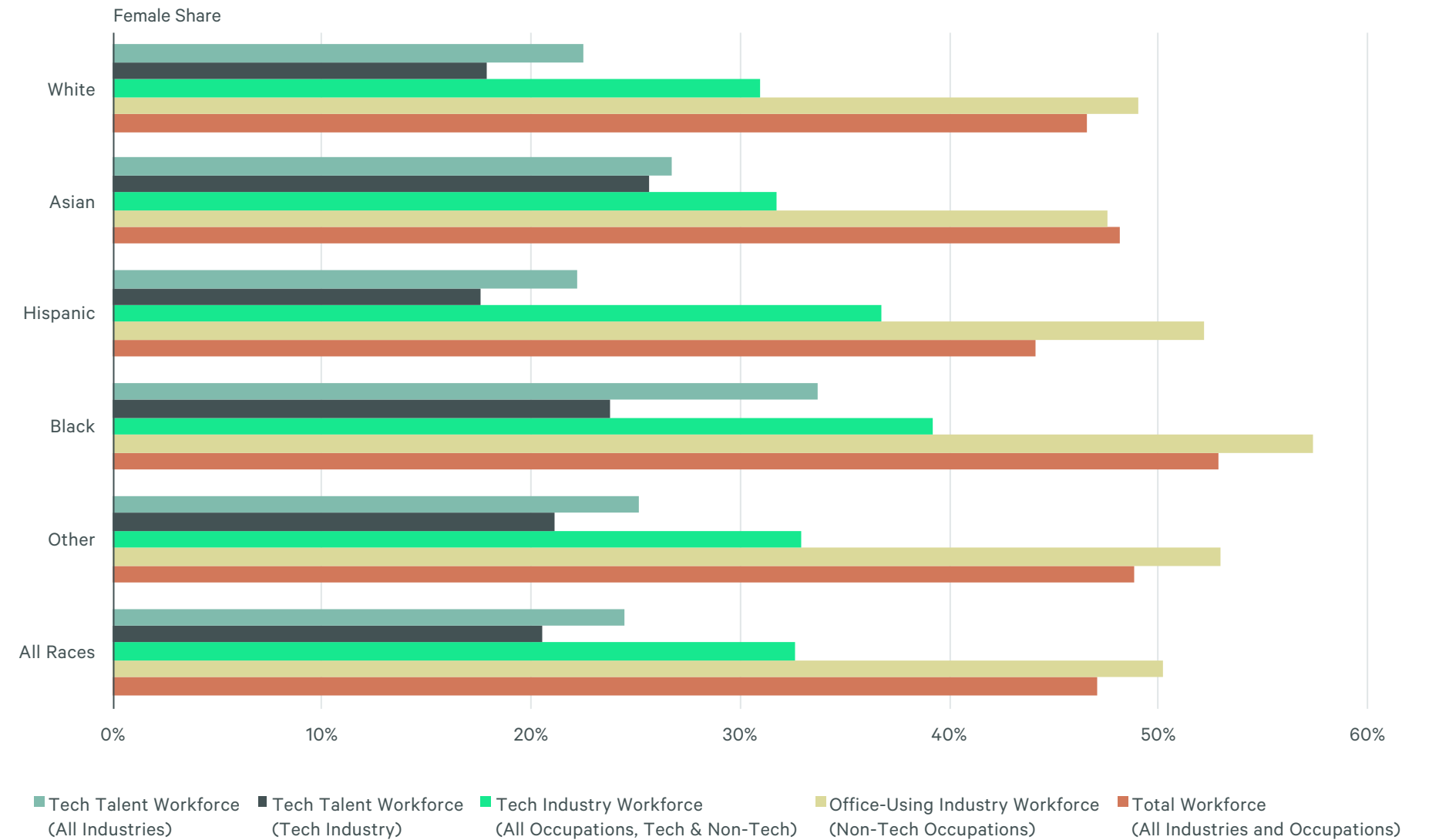
21%

of tech talent jobs in the U.S. tech industry are held by females

33%

of all jobs within the U.S. tech industry are held by females

Figure 24: Female Share of Total U.S. Workforce by Race for Certain Industries (2022)



Source: U.S. Census, IPUMS, CBRE Research, April 2024.
 Note: Office-using includes occupations that are typically performed in an office setting.

Occupation Diversity

Segmenting U.S. tech talent occupations across all industries in two broad categories showed that there was a higher concentration of female workers within Computer Support, Database & Systems occupations at 28.2% than within Software Developers, Programmers & Engineers at 19.1% (Figure 25). By race/ethnicity within these same occupations, Black and other females were less underrepresented than Black and other males.

In Canada, females were similarly concentrated in the two broad tech occupation categories, with 29.5% within Computer Support, Database & Systems occupations and 18.8% within Software Developers, Programmers & Engineers.

Figure 25: U.S. Tech Talent Occupation Category by Race/Ethnicity & Sex (2022)

Tech Talent Occupation Category	Share of Occupations	White	Asian	Hispanic	Black	Other
Software Developers, Programmers & Engineers (45% of Jobs)						
Female	19.1%	43.3%	37.9%	6.5%	7.0%	5.3%
Male	80.9%	54.3%	27.7%	7.9%	4.9%	5.3%
Total (Female and Male)	100.0%	52.2%	29.6%	7.6%	5.3%	5.3%
Computer Support, Database & Systems (55% of Jobs)						
Female	28.2%	55.7%	14.8%	9.6%	14.2%	5.7%
Male	71.8%	60.0%	13.5%	11.3%	9.6%	5.7%
Total (Female and Male)	100.0%	58.8%	13.8%	10.8%	10.9%	5.7%
Total Tech Talent (100% of Jobs)						
Female	24.4%	51.6%	22.5%	8.6%	11.8%	5.6%
Male	75.6%	57.4%	19.9%	9.7%	7.5%	5.5%
Total (Female and Male)	100.0%	56.0%	20.5%	9.5%	8.5%	5.5%

Source: U.S. Census, IPUMS, CBRE Research, April 2024.



Income Diversity

Tech talent across all industries segmented by annual wage bracket for race/ethnicity and sex showed a higher concentration of underrepresented groups and females in the lower wage ranges, generally because they have less tech work experience. This data analysis does not conclude that wages for these groups are unequal, but only their representation in each bracket. A more detailed job-by-job and person-by-person analysis beyond the scope of the data analyzed is required to make such a determination.

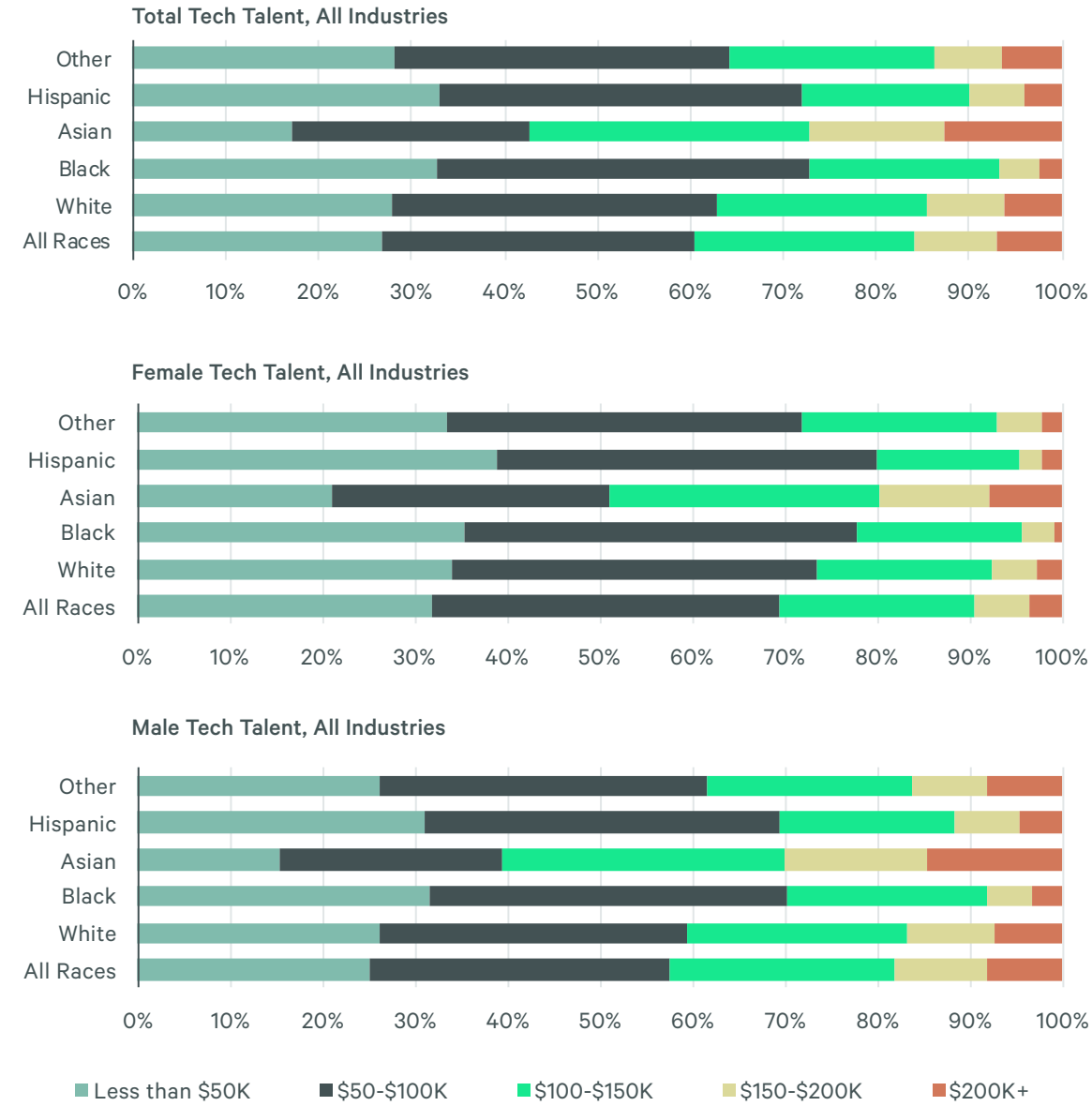
Black and Hispanic tech talent in 2022 was concentrated in the under \$100,000 wage bracket at 72.8% and 71.9%, respectively, compared with 42.8% for Asians and 62.8% for Whites (Figure 26). Female tech talent making less than \$100,000 accounted for 69.5% of their total, compared with 57.3% for males. Hispanic and Black females had the highest concentration under \$100,000, both above 76%. Asian males had the highest concentration in the \$150,000+ wage bracket at 30.1%, compared with 17.0% for Whites, 11.7% for Hispanics and 8.2% for Blacks.

The same data was compiled for software engineers, the biggest tech talent growth category (Figure 27). In general, software engineers earned higher wages than tech talent overall. Other notable differences included 29.9% of males in the \$150,000+ wage bracket, compared with 19.3% for females. Black females had the highest concentration in the under \$100,000 wage bracket at 65.9%, followed by Hispanic females at 61.1%. Asian and White males had the highest concentration above \$150,000 at 39.0% and 28.1%, respectively.



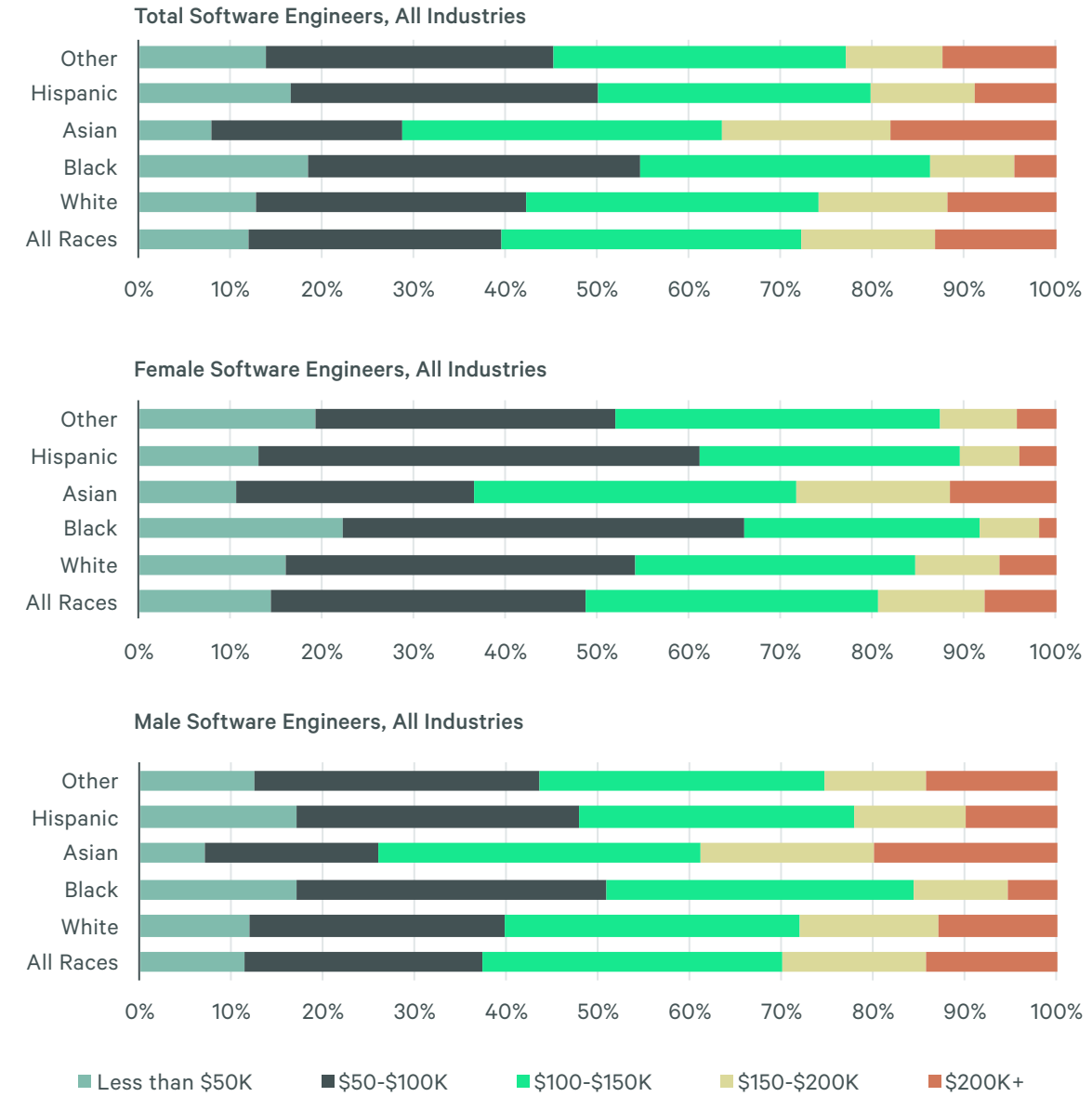
Black and Hispanic tech talent in 2022 was concentrated in the under \$100,000 wage bracket at 72.8% and 71.9%, respectively, compared with 42.8% for Asians and 62.8% for Whites.

Figure 26: U.S. Tech Talent Workforce by Race/Ethnicity and Income Range (2022)



Source: U.S. Census, IPUMS and CBRE Research, April 2024.

Figure 27: U.S. Software Engineers by Race/Ethnicity and Income Range (2022)



Source: U.S. Census, IPUMS and CBRE Research, April 2024.

In general, software engineers earned higher wages than tech talent overall. Other notable differences included 29.9% of males in the \$150,000+ wage bracket, compared with 19.3% for females.

Geographic/Market Diversity

Demographics should be benchmarked by the representative workforce within a geographical or market area rather than at the country level. Demographics vary by geography and country-level data benchmarks would assume all markets to have the same diversity.

For tech talent markets, there was variability in underrepresented race/ethnic groups and females when benchmarked by office-using industries. If the difference between tech talent and the office-using benchmark was a positive number, it means there was no underrepresentation using this metric.

For underrepresented race/ethnic groups, the most diverse large tech talent markets were Montreal, Calgary and Philadelphia, while the most diverse small tech talent markets were Quebec, Nashville and Madison, WI (Figure 28). The least diverse large markets were Greater Los Angeles-Orange County, Houston and Dallas-Ft. Worth, while the least diverse small markets were the Inland Empire, CA, Hartford and San Antonio.

For tech talent markets, there was variability in underrepresented race/ethnic groups and females when benchmarked by office-using industries. If the difference between tech talent and the office-using benchmark was a positive number, it means there was no underrepresentation using this metric.

Figure 28: Underrepresented Race/Ethnic Groups in North America Tech Talent Workforce by Market (2022)

Most Diverse

Market	Difference*	Tech Talent Share of Underrepresented Groups**	Office-Using Share of Underrepresented Groups**
Large Tech Talent Markets (> 50,000 Workforce)			
Montreal	6.0%	23.0%	17.0%
Calgary	2.4%	12.3%	9.9%
Philadelphia	0.8%	26.5%	25.7%
Vancouver	0.4%	6.8%	6.4%
Ottawa	-1.0%	10.0%	11.1%
Small Tech Talent Markets (< 50,000 Workforce)			
Quebec City	3.4%	11.1%	7.7%
Waterloo Region	1.0%	8.1%	7.1%
Nashville	0.0%	22.2%	22.2%
Madison	-0.3%	21.7%	21.9%
Cleveland	-1.4%	20.8%	22.2%

Least Diverse

Market	Difference*	Tech Talent Share of Underrepresented Groups**	Office-Using Share of Underrepresented Groups**
Large Tech Talent Markets (> 50,000 Workforce)			
L.A.-Orange Co.	-13.8%	27.6%	41.4%
Houston	-11.9%	33.8%	45.7%
Dallas-Ft. Worth	-11.1%	26.8%	37.9%
SF Bay Area	-10.9%	11.4%	22.3%
South Florida	-9.9%	53.9%	63.9%
Small Tech Talent Markets (< 50,000 Workforce)			
Inland Empire	-15.5%	38.6%	54.1%
Hartford	-12.5%	13.6%	26.1%
San Antonio	-11.6%	47.5%	59.0%
Richmond	-7.1%	26.9%	34.0%
Orlando	-6.8%	39.4%	46.1%

*Difference calculation: Tech Talent Share minus Office-Using Share Benchmark. **Hispanic, Black, Other Non-White/Non-Asian
Source: U.S. Census, IPUMS, Statistics Canada, CBRE Research, April 2024.

For females, diversity was well below the office-using benchmark in all markets. Large markets with the most female representation were Ottawa, Washington, D.C. and Raleigh-Durham (Figure 29), while small markets with the most were Cincinnati, Sacramento and Madison, WI.

24%

Tech talent share of females in Ottawa

20.9%

Tech talent share of females in Kansas City

Figure 29: Females in North America Tech Talent Workforce by Market (2022)

Most Diverse

Market	Difference*	Tech Talent Share of Females	Office-Using Share of Females
Large Tech Talent Markets (> 50,000 Workforce)			
Ottawa	-16.0%	24.0%	40.0%
Washington, D.C.	-19.3%	28.5%	47.8%
Raleigh-Durham	-19.6%	28.6%	48.1%
Toronto	-20.0%	27.1%	47.1%
Baltimore	-20.6%	29.4%	50.0%
Small Tech Talent Markets (< 50,000 Workforce)			
Cincinnati	-18.9%	29.9%	48.7%
Sacramento	-21.8%	31.3%	53.1%
Madison	-21.8%	26.4%	48.2%
Indianapolis	-24.0%	26.6%	50.6%
Waterloo Region	-24.3%	24.2%	48.5%

Least Diverse

Market	Difference*	Tech Talent Share of Females	Office-Using Share of Females
Large Tech Talent Markets (> 50,000 Workforce)			
Kansas City	-30.3%	20.9%	51.1%
Salt Lake City	-28.2%	13.6%	41.8%
Phoenix	-27.6%	22.7%	50.3%
Columbus	-27.6%	23.0%	50.5%
New York Metro	-27.5%	22.4%	49.9%
Small Tech Talent Markets (< 50,000 Workforce)			
Inland Empire	-31.9%	23.0%	54.9%
Jacksonville	-31.1%	22.6%	53.7%
Orlando	-28.3%	21.8%	50.1%
Nashville	-28.2%	23.9%	52.0%
San Antonio	-28.0%	24.7%	52.7%

*Difference calculation: Tech Talent Share minus Office-Using Share Benchmark.
Source: U.S. Census, IPUMS, Statistics Canada, CBRE Research, April 2024.

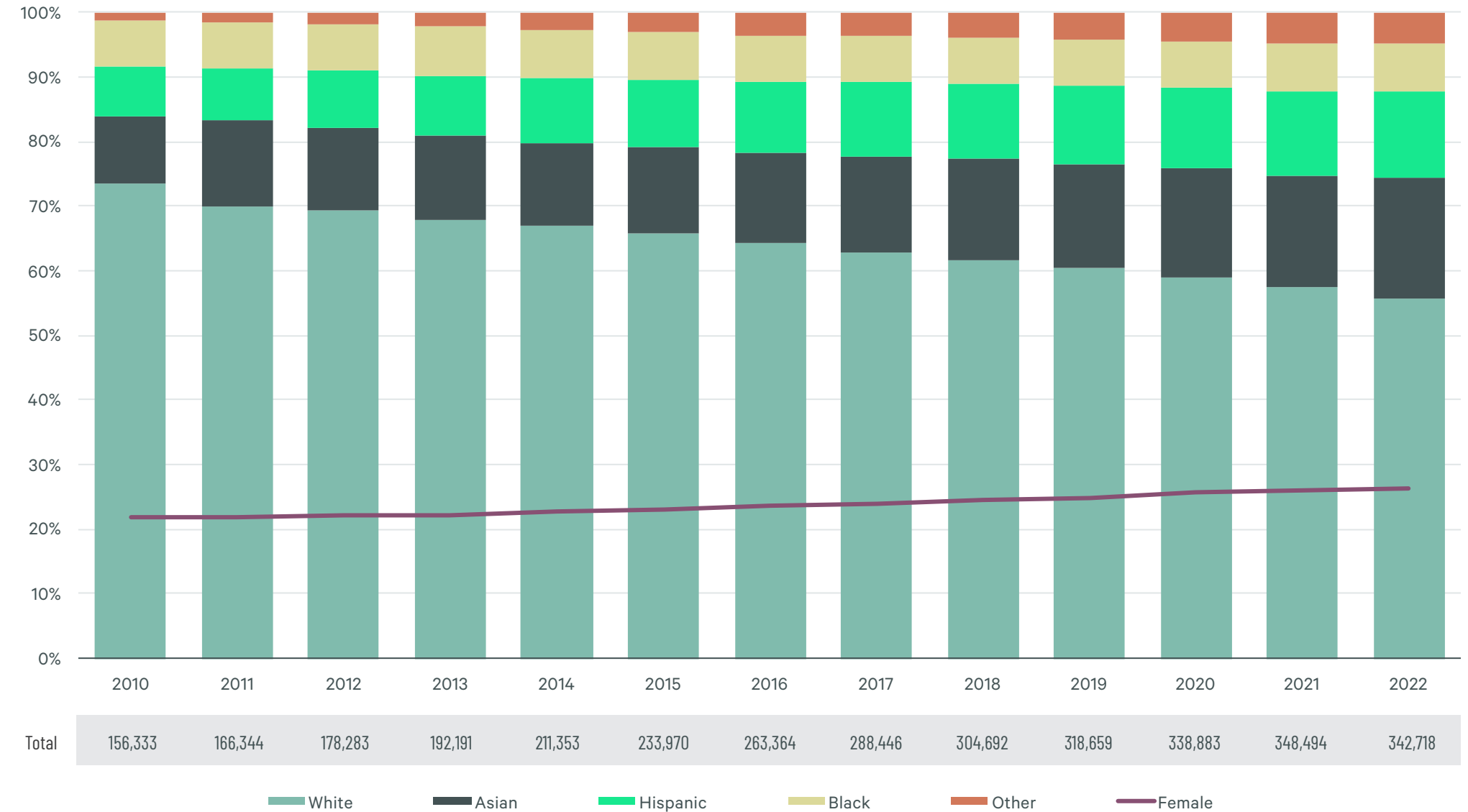
Tech Degree Graduate Diversity & Current Enrollment

The pipeline of recent tech degree graduates offers opportunities to build the next generation of talent and use analytics to measure success. These graduates, like the existing tech talent workforce, were predominantly White, Asian and male.

Of the 342,718 U.S. tech degree graduates in 2022, 25.7% were from underrepresented race/ethnicity groups and 26.3% were female (Figure 30). Underrepresented race/ethnicity groups accounted for 31.5% of total college graduates in 2022 and females accounted for 59.8%. Asian, Hispanic and other race/ethnicity groups have materially increased their shares of tech degrees since 2010, while Blacks have increased slightly and the share of Whites has declined. The share of females has grown by 4.5 percentage points.

Compared with the existing tech talent workforce, the share of tech degree graduates from underrepresented groups (25.7%) exceeded existing workers (23.1%), as did female tech degree graduates (26.3%) compared with existing workers (24.4%). This is a positive indicator of future tech talent diversity.

Figure 30: U.S. Tech Degree Graduates' Race/Ethnicity & Sex (2022)



Notes: Total tech degree graduates and male/female breakdown includes U.S. resident and foreigners. Race/ethnicity breakdown excludes unknown races and foreigners. Source: IPEDS, CBRE Research, April 2024.

For underrepresented race/ethnic groups, the most diverse markets for tech degree graduates were South Florida, San Antonio, the Inland Empire, Houston and Orlando (Figure 31). The least diverse markets were Madison, WI, Columbus, Pittsburgh, Cleveland and Detroit.

For females, the most diverse markets for tech degree graduates were Pittsburgh, Boston, Seattle, San Francisco Bay Area and New York Metro. The least diverse markets were Salt Lake City, Orlando, Jacksonville, Milwaukee and Charlotte.

The U.S. tech degree graduate pipeline grew by 8.2% year-over-year to 1.1 million as of Spring 2024, according to the National Student Clearinghouse Research Center⁴ and CBRE Research estimates of students enrolled in bachelor’s degree programs. While diversity breakdowns for these students were not available, trends suggest there will be greater tech talent workforce diversity than exists today.

The most diverse markets for tech degree graduates were South Florida, San Antonio, the Inland Empire, Houston and Orlando. The least diverse markets were Madison, WI, Columbus, Pittsburgh, Cleveland and Detroit.

Figure 31: U.S. Tech Degree Graduate's Race/Ethnicity & Sex by Market (2022)

Race/Ethnicity

Market	Total Graduates	White	Asian	Underrepresented*	Hispanic	Black	Other
Most Diverse (Highest % Underrepresented Groups*)							
South Florida	3,303	22.2%	7.4%	70.3%	53.7%	13.0%	3.6%
San Antonio	1,572	31.7%	9.9%	58.4%	46.9%	7.1%	4.4%
Inland Empire	1,642	24.4%	30.3%	45.3%	36.3%	3.9%	5.1%
Houston	2,771	28.2%	26.5%	45.3%	27.1%	15.5%	2.6%
Orlando	3,605	52.4%	9.5%	38.0%	25.6%	7.8%	4.7%
Least Diverse (Lowest % Underrepresented Groups*)							
Madison	2,387	75.4%	14.9%	9.7%	3.7%	1.6%	4.5%
Columbus	2,502	73.3%	14.3%	12.4%	4.5%	4.4%	3.5%
Pittsburgh	5,177	61.8%	23.7%	14.5%	6.0%	4.3%	4.2%
Cleveland	1,325	71.9%	12.8%	15.3%	7.7%	3.1%	4.6%
Detroit	6,637	63.3%	21.1%	15.6%	6.2%	4.6%	4.9%

*Aggregate of Hispanic, Black, Other Non-White/Non-Asian.

Notes: Total tech degree graduates and male/female breakdown includes U.S. resident and foreigners. Race/ethnicity breakdown excludes unknown races and foreigners. Source: IPEDS, CBRE Research, April 2024.

⁴ "Overview: Spring 2024 Enrollment Estimates", National Student Clearinghouse Research Center.

Sex

Market	Total Graduates	Male	Female
Most Diverse (Highest % Female)			
Pittsburgh	5,177	65.8%	34.2%
Boston	14,175	66.5%	33.5%
Seattle	5,464	67.8%	32.2%
SF Bay Area	9,873	68.1%	31.9%
New York Metro	20,848	68.4%	31.6%
Least Diverse (Highest % Male)			
Salt Lake City	8,841	82.9%	17.1%
Orlando	3,605	81.9%	18.1%
Jacksonville	426	81.0%	19.0%
Milwaukee	1,423	80.3%	19.7%
Charlotte	1,714	78.4%	21.6%

Tech Talent Diversity Progress

Greater diversity of the tech talent workforce should continue to slowly progress. Our review of U.S. Equal Employment Opportunity Commission diversity data and publicly released data from private tech companies confirms this. Accelerating the pace of workforce diversity is both a challenge and an opportunity.

Technology will be critical to support the new hybrid approach to work, in which team members can work either in the office, remotely or from widely dispersed locations. Tech talent employers were offering remote working arrangements for 15% of job postings as of May 2024, according to Lightcast data. This hybrid/remote approach shows promise to expand tech talent recruitment across all markets and increase workforce diversity.



06

Which are the highest-
and lowest-cost markets
to operate in?

Employee wages are the biggest cost for tech companies. Highly skilled and educated tech workers often command more than double the average non-tech salary.

The San Francisco Bay Area ranked highest for average tech worker salary at \$178,000 per year, about \$30,000 more than Seattle, the next highest market. The average tech worker salary in 15 of the 50 top tech talent markets was at or above their respective national average (10 U.S. and five Canada markets).

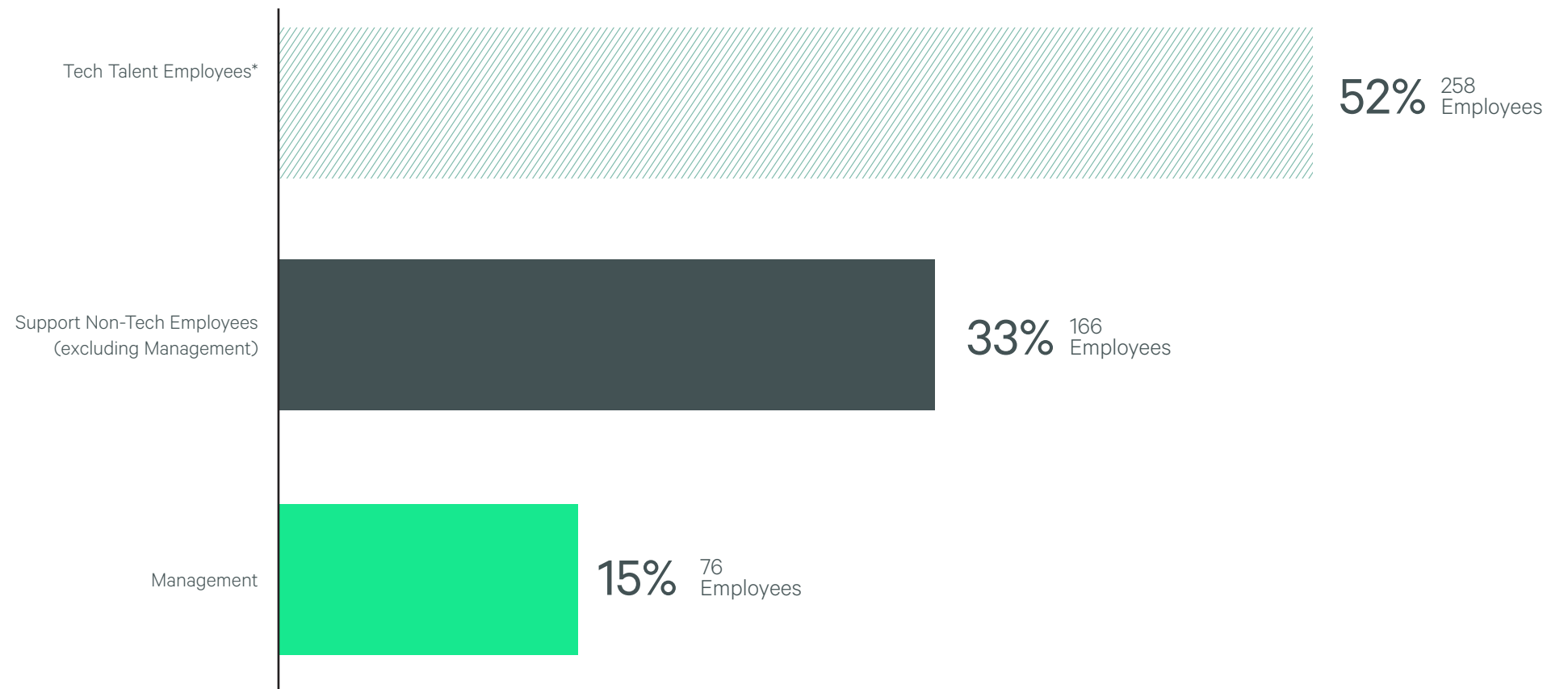
Office rent is the second-biggest cost for most companies. Even as remote and hybrid work become more common, companies understand the benefits of tech clustering and often place a higher value on specific submarkets and even specific streets convenient to tech talent. Manhattan has the highest average office rents, followed by the San Francisco Bay Area, Austin, South Florida and Seattle.

Combining wage and real estate costs provides a benchmark of what a tech company might pay to operate in any of the top 50 tech talent markets. For this comparison, U.S. occupational averages were analyzed to determine the makeup of a typical 500-person tech company (Figure 32) using 60,000 sq. ft. of office space. Due to hybrid and remote work, the amount of office space needed for 500 employees was reduced from 75,000 sq. ft. in 2022.

Local market wages were applied to the various occupations to determine total annual wage costs by market, while local market rents were used to estimate the annual cost of renting a 60,000-sq.-ft. office to house 500 employees. The San Francisco Bay Area topped the list with the highest estimated annual cost in 2023 at \$81 million, followed distantly by New York Metro, Seattle and Boston.

The lowest cost markets were all in Canada (Figure 33). Since tech industry wages are 17% higher than the U.S. average, tech companies can expect higher annual costs. The 50-market average annual cost exceeded last year's by \$3.6 million, almost entirely due to wage increases.

Figure 32: Average U.S. Tech Company Occupation Pools



* Tech Talent includes the following occupation categories: software development and programming, computer support, database & systems, technology & engineering related and computer information system management. Source: U.S. Bureau of Labor Statistics (National), April 2024.

Figure 33: Estimated One-Year Company Costs by Market (500 Employees; 60,000 Sq. Ft. of Office Space)

Market	Rent Cost ¹	Tech Talent Wages ²	Support Non-Tech Wages ³	Management Wages ⁴	Total
SF Bay Area	\$3,973,800	\$45,830,087	\$12,457,095	\$18,745,780	\$81,006,762
New York Metro**	\$4,609,800	\$36,259,547	\$10,104,138	\$16,705,560	\$67,679,045
Seattle	\$2,759,142	\$38,169,882	\$9,835,526	\$16,616,640	\$67,381,189
Boston	\$2,681,400	\$34,823,134	\$12,434,217	\$14,813,160	\$64,751,911
Washington, D.C.	\$1,577,400	\$33,660,561	\$13,070,493	\$12,993,720	\$61,302,174
Baltimore	\$2,596,200	\$34,857,219	\$8,889,542	\$14,920,320	\$61,263,281
Atlanta	\$1,847,400	\$29,604,832	\$15,685,494	\$13,674,680	\$60,812,406
San Diego	\$2,397,600	\$33,916,673	\$9,335,095	\$15,103,480	\$60,752,848
Austin	\$2,884,949	\$30,236,522	\$13,007,972	\$13,740,040	\$59,869,483
Denver	\$1,971,215	\$33,381,908	\$10,219,593	\$14,127,640	\$59,700,355
L.A.-Orange Co.	\$2,632,200	\$32,110,856	\$9,991,888	\$14,318,780	\$59,053,723
Charlotte	\$1,992,600	\$30,819,403	\$11,047,931	\$13,359,280	\$57,219,214
Raleigh-Durham	\$1,996,800	\$31,537,993	\$9,542,266	\$13,577,400	\$56,654,459
Dallas-Ft. Worth	\$1,910,943	\$29,937,871	\$10,392,709	\$13,363,080	\$55,604,603
Chicago	\$2,171,629	\$29,224,613	\$10,771,495	\$12,790,040	\$54,957,778
Philadelphia	\$2,007,547	\$29,494,609	\$9,270,515	\$13,981,720	\$54,754,391
Portland	\$1,947,594	\$30,780,877	\$8,682,991	\$13,010,440	\$54,421,902
Phoenix	\$1,883,400	\$29,070,145	\$10,532,026	\$12,832,600	\$54,318,171
Minneapolis-St. Paul	\$1,741,409	\$29,059,735	\$9,599,089	\$13,568,280	\$53,968,513
Sacramento	\$1,586,331	\$30,124,986	\$9,031,229	\$13,176,880	\$53,919,426
Richmond	\$1,284,600	\$29,049,200	\$9,269,184	\$14,066,080	\$53,669,064
Houston	\$1,866,960	\$27,840,639	\$10,811,882	\$13,084,160	\$53,603,640
Hartford	\$1,191,600	\$28,793,015	\$11,051,179	\$12,359,120	\$53,394,915
Cincinnati	\$1,224,000	\$25,706,817	\$12,864,356	\$12,563,560	\$52,358,733
Tampa	\$2,762,400	\$26,250,378	\$10,321,570	\$11,909,200	\$51,243,548
South Florida	\$1,842,600	\$27,136,641	\$9,777,615	\$12,460,200	\$51,217,056

Market	Rent Cost ¹	Tech Talent Wages ²	Support Non-Tech Wages ³	Management Wages ⁴	Total
Salt Lake City	\$1,283,400	\$27,134,250	\$9,230,252	\$12,898,720	\$50,546,622
Virginia Beach	\$1,575,951	\$27,658,165	\$8,657,002	\$12,614,860	\$50,505,978
Detroit	\$1,150,800	\$26,971,102	\$9,807,720	\$12,540,380	\$50,470,002
Inland Empire	\$1,461,600	\$26,696,491	\$9,432,555	\$12,818,920	\$50,409,566
Kansas City	\$1,307,400	\$26,259,192	\$10,542,424	\$12,052,840	\$50,161,857
San Antonio	\$1,630,825	\$26,557,716	\$9,279,180	\$12,270,200	\$49,737,922
Cleveland	\$1,150,800	\$24,520,236	\$10,626,594	\$13,251,360	\$49,548,990
Columbus	\$1,296,979	\$25,882,057	\$9,927,198	\$12,318,080	\$49,424,314
Jacksonville	\$1,352,320	\$26,367,600	\$9,562,474	\$11,965,440	\$49,247,834
Nashville	\$1,913,400	\$26,054,851	\$9,192,373	\$11,836,240	\$48,996,864
Orlando	\$1,617,043	\$25,255,880	\$8,987,361	\$12,584,840	\$48,445,123
Madison	\$1,264,200	\$24,940,950	\$9,863,979	\$11,796,720	\$47,865,849
Pittsburgh	\$1,504,800	\$25,172,763	\$9,400,259	\$11,705,520	\$47,783,341
Indianapolis	\$1,328,400	\$25,008,946	\$10,531,655	\$10,725,880	\$47,594,880
St. Louis	\$1,346,400	\$25,565,187	\$8,914,549	\$11,580,880	\$47,407,016
Milwaukee	\$1,186,593	\$24,071,954	\$9,456,636	\$12,213,200	\$46,928,384
Vancouver*	\$2,169,600	\$20,238,948	\$9,264,525	\$8,551,078	\$40,224,151
Toronto*	\$2,434,800	\$21,021,993	\$8,809,157	\$7,888,249	\$40,154,198
Calgary*	\$1,389,000	\$20,008,258	\$9,003,577	\$8,710,297	\$39,111,132
Ottawa*	\$1,532,400	\$20,310,429	\$9,241,406	\$7,416,279	\$38,500,514
Waterloo Region*	\$1,305,600	\$20,378,088	\$8,174,863	\$7,703,188	\$37,561,739
Montreal*	\$1,676,400	\$18,398,210	\$8,555,956	\$8,348,452	\$36,979,017
Edmonton*	\$1,474,800	\$17,929,185	\$8,241,391	\$7,543,969	\$35,189,346
Quebec City*	\$1,240,200	\$18,171,725	\$8,507,381	\$6,697,262	\$34,616,568

¹ Average Rent × 60,000 SF ³ Average Wage × 166 People
² Average Wage × 258 People ⁴ Average Wage × 76 People

* In US\$ ** New York office rent cost represents Manhattan only, all others are metro area.
 Source: U.S. Bureau of Labor Statistics, April 2024, Statistics Canada, April 2024, CBRE Research (Metro), Q4 2023.

07

How is Tech Talent
quality vs. cost
measured?

Assessing the quality of a labor market is challenging because no standard metrics exist.

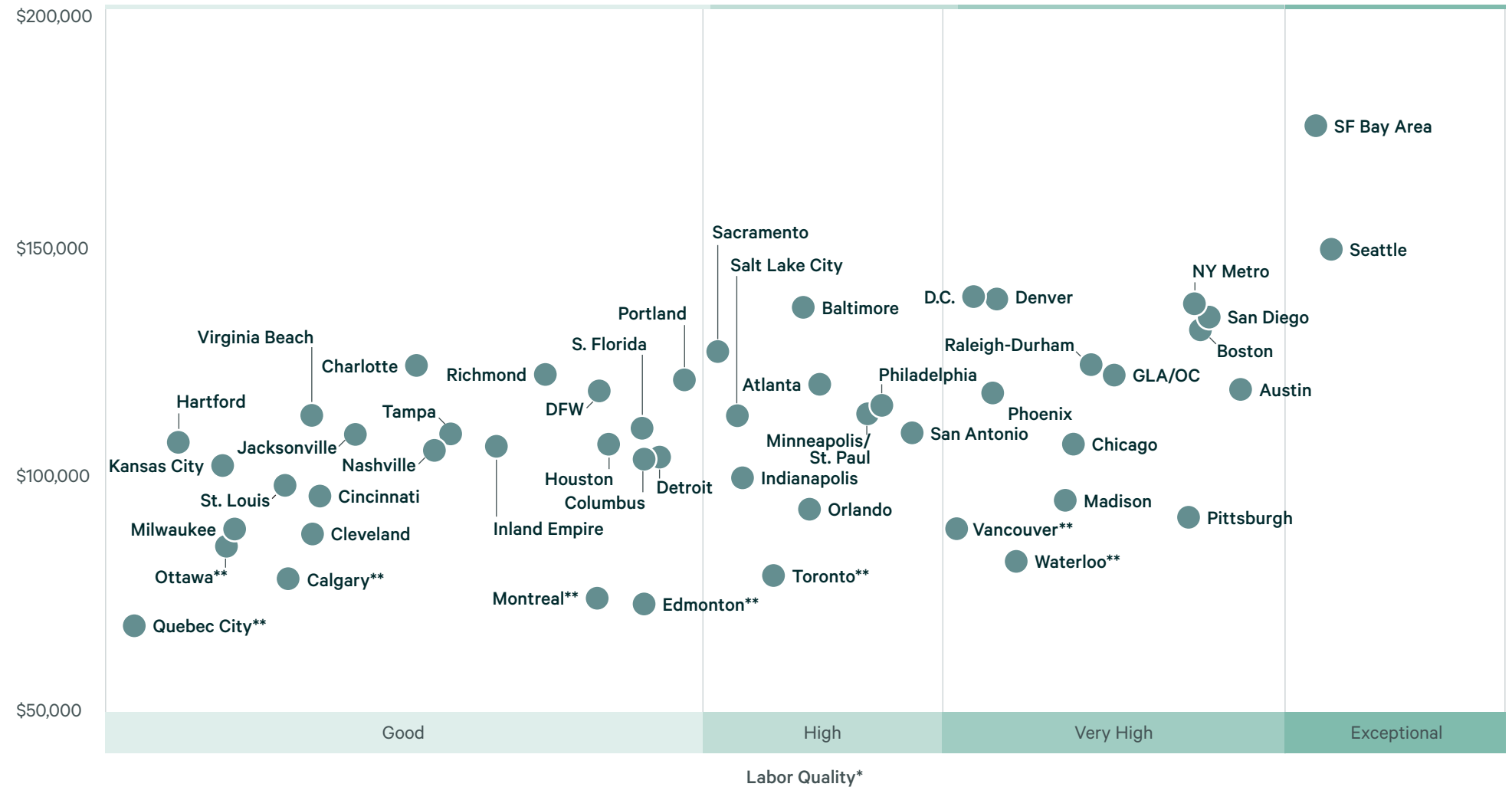
Since salaries are the largest expense for most companies seeking tech talent, the quality of that tech talent is becoming one of their most important considerations. Figure 34 plots a quality assessment for software developers against their average salary by market to illustrate this trade-off across the top 50 tech talent markets.

Software engineer quality was measured by the number and concentration of software engineers with three or more years of experience and who graduated from one of the top 25 computer science schools in the U.S. and top five in Canada, as determined by U.S. News & World Report. The highest-cost markets (San Francisco Bay Area and Seattle) also have the highest concentration of quality software engineers. Nevertheless, good, high and very high concentrations of quality software engineers are available in relatively low-cost markets, providing a range of options. Due in part to exchange rates, the Waterloo Region and Vancouver in Canada provide the best value when it comes to cost and quality, followed by Madison, WI and Pittsburgh in the U.S.

Good, high and very high concentrations of quality software engineers are available in relatively low-cost markets.

Figure 34: Tech Talent Quality vs. Cost Analysis

Average Annual Salary for Software Engineer (US\$)



Source: U.S. Bureau of Labor Statistics, April 2024, Statistics Canada, April 2024, U.S. News & World Report, CBRE Labor Analytics, CBRE Research, 2024.

LinkedIn Disclaimer: LinkedIn Talent Insights data is derived by aggregating profile data voluntarily submitted by LinkedIn members. As such, LinkedIn cannot guarantee the accuracy of LinkedIn Talent Insights data.

*Concentration of software engineers/developers with 3+ years of experience that have earned degrees from the top 25 computer information science programs in the U.S. and top 5 in Canada relative to total software engineers/developers, as rated by U.S. News & World Report.

**Data in US\$.

08

How does Tech Talent
impact commercial
real estate?

Since 2020, U.S. tech talent growth, primarily in the high-tech industry, totaled 823,000 jobs and has been the top driver of U.S. office leasing activity.

Recent economic uncertainty and layoffs caused a decline in the high-tech industry's share of total U.S. office leasing activity⁵ between 2022 and mid-2023. While there has been a rebound since that time, high-tech industry office leasing remains well below pre-pandemic levels.

Prior to the pandemic, many tech talent markets, especially those with high concentrations or clusters of tech companies, had seen rising rents and declining vacancy rates. But since early 2020, all but five markets have seen office vacancy rates increase, with the highest Q4 2023 vacancy rate in Hartford (29%). Compared with pre-pandemic Q1 2020, rents in the San Francisco Bay Area and New York were 10% and 3% lower, respectively, in Q4 2023. Austin, the Waterloo Region, Dallas-Ft. Worth, South Florida, Tampa and Vancouver had rent growth of 20% or more over the same period.

Tech talent continues to impact office markets through work-from-home and return-to-office policies. As hybrid work arrangements become more common, tech employers have been reconsidering their office space strategy. While many have downsized, others have maintained their portfolio size to accommodate large team meetings and ensure that there is sufficient space for collaboration.

⁵Includes leases of 10,000 sq. ft. or more each quarter for the 50+ markets tracked by CBRE Research

10%

Drop in San Francisco Bay Area average office rents

20%

Increase in rents in Waterloo Region, Dallas-Ft. Worth, South Florida, Tampa and Vancouver

Figure 35: Office Asking Rent by Market (Q4 2023)

Market	Annual Gross Direct Asking Rent Per SF (US\$)	Vacancy Rate
New York (Manhattan)*	\$76.83	15.9%
SF Bay Area	\$66.23	24.9%
Austin	\$48.08	23.1%
South Florida	\$46.04	17.1%
Seattle	\$45.99	23.6%
Boston	\$44.69	16.5%
Los Angeles-Orange Co.	\$43.87	19.9%
Washington, D.C.	\$43.27	21.8%
Vancouver	\$40.58	9.4%
San Diego	\$39.96	13.8%
Chicago	\$36.19	25.3%
Toronto	\$36.16	18.8%
Philadelphia	\$33.46	23.7%
Raleigh-Durham	\$33.28	18.9%
Charlotte	\$33.21	23.3%
Denver	\$32.85	23.1%
Portland	\$32.46	23.2%
Nashville	\$31.89	18.7%
Dallas-Ft. Worth	\$31.85	25.3%
Phoenix	\$31.39	24.6%
Houston	\$31.12	22.8%
Atlanta	\$30.79	25.0%
Tampa	\$30.71	20.4%
Minneapolis-St. Paul	\$29.02	22.1%
Montreal	\$27.94	17.9%

Market	Annual Gross Direct Asking Rent Per SF (US\$)	Vacancy Rate
San Antonio	\$27.18	18.7%
Orlando	\$26.95	15.7%
Sacramento	\$26.44	16.5%
Baltimore	\$26.29	19.1%
Salt Lake City	\$26.27	23.8%
Ottawa	\$25.54	13.3%
Pittsburgh	\$25.08	15.1%
Edmonton	\$24.58	21.4%
Inland Empire	\$24.36	8.8%
Calgary	\$23.15	27.9%
Jacksonville	\$22.54	22.2%
St. Louis	\$22.44	16.2%
Indianapolis	\$22.14	19.0%
Kansas City	\$21.79	17.5%
Waterloo Region	\$21.76	13.7%
Columbus	\$21.62	23.0%
Richmond	\$21.41	12.7%
Virginia Beach	\$21.39	10.6%
Madison	\$21.07	5.3%
Quebec City	\$20.67	11.1%
Cincinnati	\$20.40	22.2%
Hartford	\$19.86	29.1%
Milwaukee	\$19.78	14.4%
Cleveland	\$19.18	15.5%
Detroit	\$19.18	20.0%

Source: CBRE Research (Office Market), Q4 2023. * New York represents Manhattan only, all others are metro area.

The in-migration of talent to these tech markets also has a sizeable impact on residential real estate. Apartment rents have increased in every market except the San Francisco Bay Area since 2018. Manhattan was the most expensive last year with an average monthly rent of \$3,645 (Figure 36). All but one market has seen average apartment rents recover to pre-pandemic levels, led by Tampa with 35% rent growth from Q1 2020 to Q4 2023. Comparing the annual average apartment rent with the annual average tech-worker salary shows that tech salaries generally can cover the cost of living in most of the priciest markets (Figure 37), based on the affordability standard of 30% of income to housing.

The pandemic has fundamentally changed real estate market dynamics across North America. How we use office space in the future and where we choose to live is unlikely to revert to pre-pandemic patterns. Technology’s importance in society and to real estate utilization has been accelerated and disrupted. This will create new opportunities for both real estate occupiers and investors in tech talent markets.

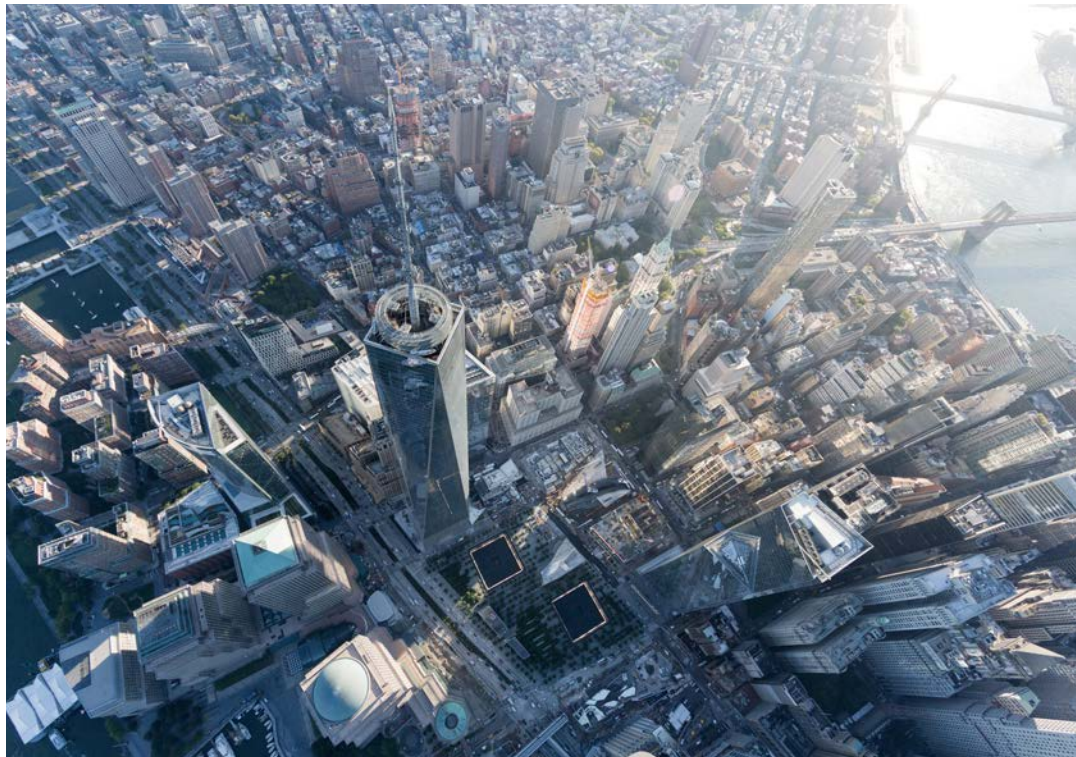


Figure 36: Average Monthly Apartment Rent by Market (Q4 2023)

Market	Average Monthly Apartment Rent (US\$)	Apt. Rent 5 Year Growth**	Market	Average Monthly Apartment Rent (US\$)	Apt. Rent 5 Year Growth**
New York (Manhattan)*	\$3,645	15%	Minneapolis-St. Paul	\$1,531	10%
SF Bay Area	\$2,930	-1%	Dallas-Ft. Worth	\$1,527	27%
Boston	\$2,812	20%	Raleigh-Durham	\$1,527	32%
San Diego	\$2,804	33%	Pittsburgh	\$1,492	17%
Los Angeles-Orange Co.	\$2,794	16%	Virginia Beach	\$1,489	38%
South Florida	\$2,485	36%	Richmond	\$1,484	29%
Inland Empire	\$2,198	38%	Jacksonville	\$1,468	29%
Seattle	\$2,114	16%	Madison	\$1,463	24%
Washington, D.C.	\$2,112	15%	Cincinnati	\$1,367	30%
Chicago	\$1,966	19%	Houston	\$1,353	15%
Sacramento	\$1,950	29%	Toronto	\$1,341	34%
Denver	\$1,902	23%	Vancouver	\$1,336	31%
Philadelphia	\$1,844	25%	Detroit	\$1,316	23%
Tampa	\$1,817	40%	Columbus	\$1,312	26%
Hartford	\$1,782	26%	Kansas City	\$1,300	27%
Orlando	\$1,751	29%	St. Louis	\$1,288	27%
Portland	\$1,712	20%	Indianapolis	\$1,259	34%
Baltimore	\$1,673	22%	San Antonio	\$1,246	20%
Atlanta	\$1,626	27%	Cleveland	\$1,240	23%
Nashville	\$1,602	28%	Waterloo Region	\$1,156	38%
Austin	\$1,589	20%	Calgary	\$1,154	37%
Phoenix	\$1,574	37%	Ottawa	\$1,130	31%
Charlotte	\$1,556	33%	Edmonton	\$934	12%
Salt Lake City	\$1,554	32%	Montreal	\$789	35%
Milwaukee	\$1,546	22%	Quebec City	\$736	23%

Source: CBRE Econometric Advisors, Axiometrics, CMHC, Q4 2023.
 * New York represents Manhattan only, all others are metro area. **2018 to 2023.

Figure 37: Ratio of Apartment Rent to Average Tech Wage by Market (US\$)

Market	Annualized Apartment Rent (2023)	Average Annual Tech Wage (2023)	Rent-to-Tech Wage Ratio
New York (Manhattan)*	\$43,741	\$140,541	31.1%
South Florida	\$29,814	\$101,746	29.3%
Los Angeles-Orange Co.	\$33,531	\$124,461	26.9%
San Diego	\$33,651	\$131,460	25.6%
Inland Empire	\$26,373	\$103,475	25.5%
Boston	\$33,741	\$134,973	25.0%
Orlando	\$21,015	\$97,891	21.5%
Chicago	\$23,593	\$113,274	20.8%
Tampa	\$21,798	\$105,181	20.7%
Toronto	\$16,096	\$78,446	20.5%
Sacramento	\$23,403	\$116,764	20.0%
Milwaukee	\$18,550	\$93,302	19.9%
SF Bay Area	\$35,159	\$177,636	19.8%
Vancouver	\$16,035	\$81,481	19.7%
Philadelphia	\$22,129	\$114,320	19.4%
Hartford	\$21,378	\$111,601	19.2%
Nashville	\$19,221	\$100,988	19.0%
Washington, D.C.	\$25,341	\$135,106	18.8%
Pittsburgh	\$17,908	\$97,569	18.4%
Madison	\$17,551	\$96,670	18.2%
Calgary	\$13,849	\$77,551	17.9%
Denver	\$22,819	\$129,387	17.6%
Waterloo Region	\$13,875	\$78,985	17.6%
Salt Lake City	\$18,643	\$107,202	17.4%
Jacksonville	\$17,619	\$102,200	17.2%



Market	Annualized Apartment Rent (2023)	Average Annual Tech Wage (2023)	Rent-to-Tech Wage Ratio
Ottawa	\$13,558	\$78,723	17.2%
Portland	\$20,544	\$119,306	17.2%
Seattle	\$25,372	\$147,945	17.1%
Atlanta	\$19,511	\$114,747	17.0%
Virginia Beach	\$17,868	\$105,172	17.0%
Phoenix	\$18,891	\$112,675	16.8%
Cincinnati	\$16,398	\$99,639	16.5%
Minneapolis-St. Paul	\$18,376	\$112,635	16.3%
Austin	\$19,062	\$117,196	16.3%
Edmonton	\$11,204	\$69,493	16.1%
Richmond	\$17,808	\$112,594	15.8%
Dallas-Ft. Worth	\$18,323	\$116,038	15.8%
Columbus	\$15,748	\$100,318	15.7%
Cleveland	\$14,881	\$95,040	15.7%
Charlotte	\$18,671	\$119,455	15.6%
St. Louis	\$15,459	\$99,090	15.6%
Indianapolis	\$15,112	\$96,934	15.6%
Baltimore	\$20,075	\$130,467	15.4%
Kansas City	\$15,605	\$101,780	15.3%
Detroit	\$15,797	\$104,539	15.1%
Houston	\$16,233	\$107,909	15.0%
Raleigh-Durham	\$18,322	\$122,240	15.0%
San Antonio	\$14,950	\$102,937	14.5%
Montreal	\$9,467	\$71,311	13.3%
Quebec City	\$8,833	\$70,433	12.5%

Source: U.S. Bureau of Labor Statistics April 2024, Statistics Canada April 2024, CBRE Econometric Advisors, Axiometrics, CMHC, Q4 2023.

* New York represents Manhattan only, all others are metro area.

09

What are the
up-and-coming
markets for Tech Talent?

The rising importance of technology in business and society has caused a global expansion of tech talent labor pools and implementation of more distributed labor strategies by tech talent employers seeking innovation potential and efficiency. Latin America and smaller interior U.S. and Canada markets have experienced tech talent growth as a result.

During the most recent economic growth cycle, Latin America's tech talent has increasingly focused on software development and innovation.



Latin America's Top Markets

Latin America has long been an important source of tech talent for North America, initially focused on manufacturing and business services. During the most recent economic growth cycle, Latin America's tech talent has increasingly focused on software development and innovation. This has attracted many multinational technology companies to the region, as well as further developed Latin America's own technology industry.

Over the past five years, Latin America’s tech talent workforce has boomed. While costs have risen with rapid growth, average wages in Latin America remain about 38% of those in the U.S. The three largest Latin American tech talent markets are Mexico City, Sao Paulo and Santiago, while the fastest growing is Monterrey, Mexico.

Real estate costs are also relatively low, making Latin America an even more attractive option for tech talent employers.

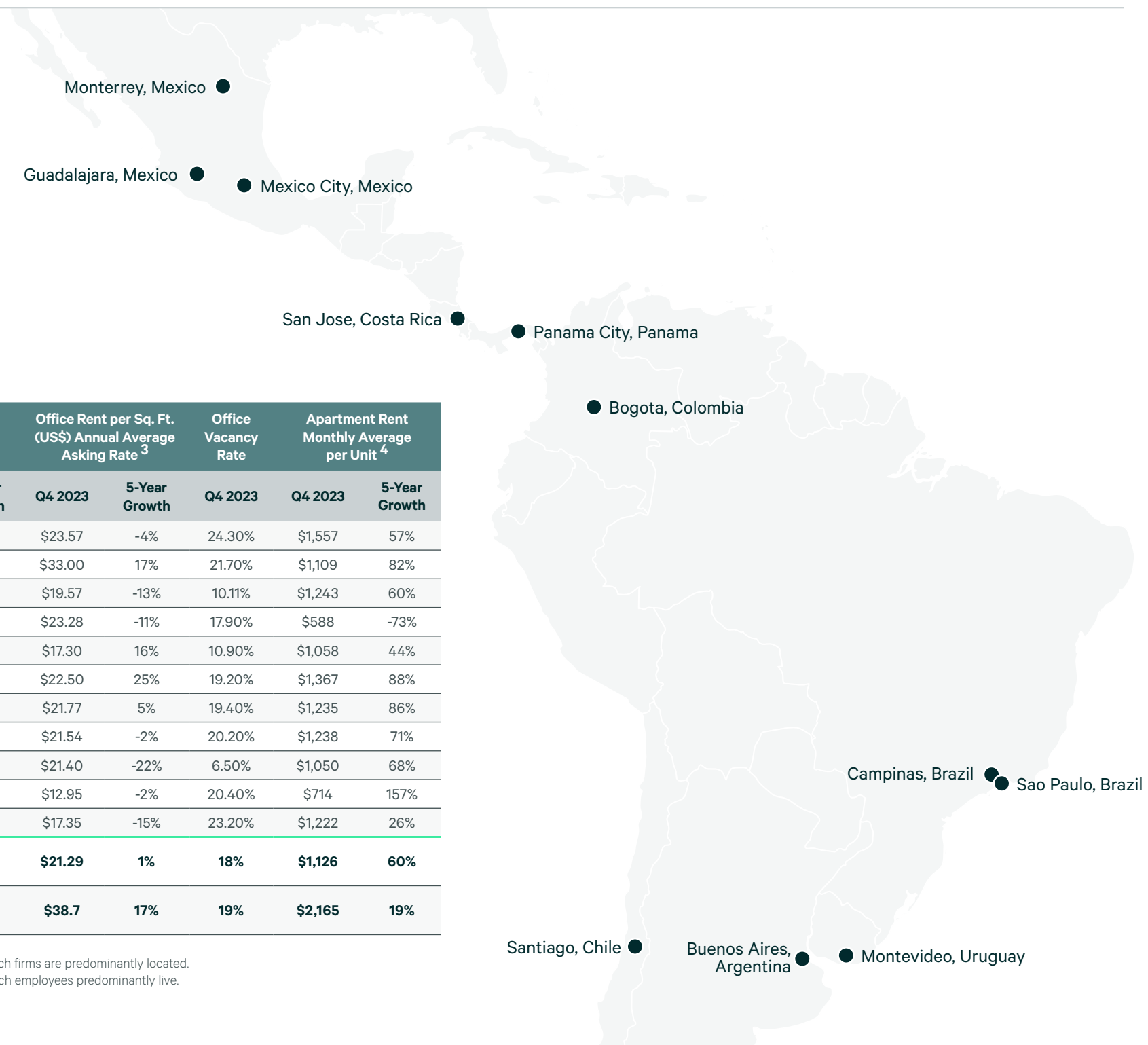


Figure 38: Top Latin American Markets

Market	Tech Talent Employment ¹		Tech Talent Average Annual Wage (US\$) ²		Software Developer Average Annual Wage (US\$) ²		Tech Degree Completions		Office Rent per Sq. Ft. (US\$) Annual Average Asking Rate ³		Office Vacancy Rate	Apartment Rent Monthly Average per Unit ⁴	
	2023 Jobs	5-Year Growth	2023 Wage	5-Year Growth	2023 Wage	5-Year Growth	2023 Degrees	5-Year Growth	Q4 2023	5-Year Growth	Q4 2023	Q4 2023	5-Year Growth
Mexico City, Mexico	300,000	88%	\$39,004	42%	\$47,938	32%	24,050	24%	\$23.57	-4%	24.30%	\$1,557	57%
Sao Paulo, Brazil	240,227	17%	\$53,355	47%	\$62,952	44%	15,972	34%	\$33.00	17%	21.70%	\$1,109	82%
Santiago, Chile	135,601	15%	\$45,589	36%	\$58,459	30%	7,286	56%	\$19.57	-13%	10.11%	\$1,243	60%
Buenos Aires, Argentina	112,943	38%	\$13,435	-69%	\$15,558	-78%	4,858	17%	\$23.28	-11%	17.90%	\$588	-73%
Bogota, Colombia	106,719	33%	\$28,131	37%	\$31,784	24%	6,901	27%	\$17.30	16%	10.90%	\$1,058	44%
San Jose, Costa Rica	57,616	32%	\$56,119	79%	\$64,005	54%	2,098	9%	\$22.50	25%	19.20%	\$1,367	88%
Guadalajara, Mexico	55,000	69%	\$37,639	39%	\$46,199	33%	6,495	21%	\$21.77	5%	19.40%	\$1,235	86%
Monterrey, Mexico	45,000	125%	\$37,999	40%	\$47,158	32%	4,744	70%	\$21.54	-2%	20.20%	\$1,238	71%
Montevideo, Uruguay	23,111	39%	\$41,464	50%	\$48,413	52%	554	19%	\$21.40	-22%	6.50%	\$1,050	68%
Campinas, Brazil	21,753	38%	\$45,939	37%	\$52,193	24%	2,870	27%	\$12.95	-2%	20.40%	\$714	157%
Panama City, Panama	18,900	15%	\$43,672	55%	\$50,761	57%	1,210	22%	\$17.35	-15%	23.20%	\$1,222	26%
Latin America 11-Market Averages	982,174	54%	\$45,833	37%	\$55,127	28%	77,037	31%	\$21.29	1%	18%	\$1,126	60%
U.S. Overall Averages	6,162,730	18%	\$119,540	25%	\$128,529	24%	348,494	32%	\$38.7	17%	19%	\$2,165	19%

¹ Jobs related to the development, operation, monitoring and support of the digitized information transmission processes.

² Based on 2023 annual average exchange rates.

³ Submarkets where tech firms are predominantly located.

⁴ Submarkets where tech employees predominantly live.

North America's Next 25

Fostering talent development in lesser-known and underdeveloped U.S. and Canadian markets could offer additional talent pools to employers seeking to expand their geographical reach and uncover opportunities. They have been separately ranked from the top 50 markets according to their relative strength. In the U.S., most of them are in the Midwest and South.



Figure 39: North America's Next 25 Markets

Market	Total Tech Employment (2023)	Total Tech Growth (5 Years)	Total Tech Wages (2023)	Total Tech Wage Growth (5 Years)	Software Developer Wage (2023)	Software Developer Wage Growth (5 Years)	Tech Talent Degree Graduates (2022)
1 Huntsville	25,910	17.9%	\$114,085	19.6%	\$113,774	9.7%	988
2 Colorado Springs	20,160	12.3%	\$116,830	20.0%	\$125,620	15.5%	1,500
3 Dayton	17,150	-1.8%	\$92,556	5.6%	\$84,565	-13.5%	1,689
4 London, Ontario*	16,400	88.5%	\$66,873	26.7%	\$69,139	9.7%	1,081
5 Halifax*	15,600	64.2%	\$69,216	31.0%	\$76,088	31.1%	1,069
6 Albany	18,750	-5.0%	\$98,981	18.4%	\$101,461	18.4%	2,007
7 Omaha	23,330	-0.5%	\$101,814	24.9%	\$105,257	20.5%	910
8 Trenton	13,760	11.7%	\$124,390	30.6%	\$123,475	26.0%	864
9 Providence	20,060	4.3%	\$112,504	20.7%	\$117,998	23.6%	1,928
10 Rochester	22,560	-2.0%	\$101,189	29.0%	\$102,015	14.7%	2,234
11 Palm Bay, FL	16,130	20.0%	\$107,206	17.7%	\$117,957	10.4%	631
12 Stamford	16,350	39.5%	\$127,759	35.6%	\$129,190	12.9%	353
13 Winnipeg*	21,300	40.1%	\$63,375	13.4%	\$64,424	23.3%	628**
14 Las Vegas	22,750	16.2%	\$96,519	18.1%	\$113,916	17.7%	516
15 Tucson	16,710	0.8%	\$105,480	19.5%	\$116,687	18.4%	1,277
16 Des Moines	19,180	5.1%	\$102,619	25.9%	\$102,890	16.3%	98
17 Buffalo	15,000	-11.7%	\$99,743	25.2%	\$100,826	19.2%	1,997
18 Birmingham	16,570	3.7%	\$97,824	19.5%	\$96,124	10.8%	527
19 Oklahoma City	23,300	8.6%	\$93,404	21.6%	\$98,178	13.0%	996
20 Boise	11,910	1.4%	\$109,771	50.5%	\$134,574	64.4%	458
21 Louisville	17,620	-13.4%	\$90,136	16.7%	\$94,448	13.7%	647
22 Harrisburg	10,680	-22.6%	\$95,841	15.7%	\$95,676	11.0%	918
23 Albuquerque	16,110	10.2%	\$100,935	24.4%	\$109,444	38.7%	446
24 Grand Rapids	16,320	21.8%	\$87,693	22.8%	\$83,951	10.6%	801
25 Honolulu	12,930	8.1%	\$99,461	18.3%	\$110,385	29.7%	411

Source: U.S. Bureau of Labor Statistics (Metro), Statistics Canada (Metro), April 2024.

Note: Markets were separately ranked according to their relative strength based on eight of the 13 metrics used for the top 50. *Data in US\$ **2021 data

10

Market Profiles

01 San Francisco Bay Area

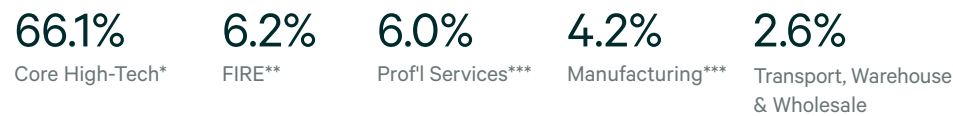
Score
83.25

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	436,740	18.6%	\$177,636	39.1%
Software Developers & Programmers	239,340	48.6%	\$180,945	35.0%
Computer Support, Database & Systems	105,580	-18.5%	\$146,151	32.9%
Computer & Information Systems Managers	47,710	51.6%	\$246,655	23.4%
Technology Engineering-Related	44,110	-4.2%	\$162,476	53.1%
Total Non-Tech Occupations	367,300	-15.8%	\$94,491	39.1%
Sales	89,360	3.5%	\$131,563	50.6%
Administrative & Office Support	48,960	-10.5%	\$60,059	26.3%
Business Operations & Finance	174,520	-24.3%	\$118,831	24.8%
Marketing	54,460	-15.5%	\$131,563	50.1%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



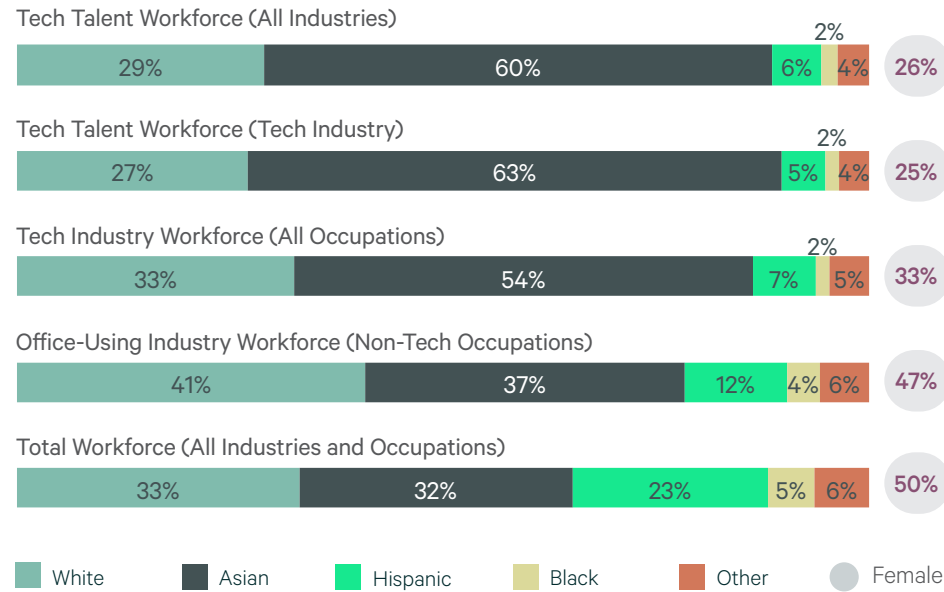
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

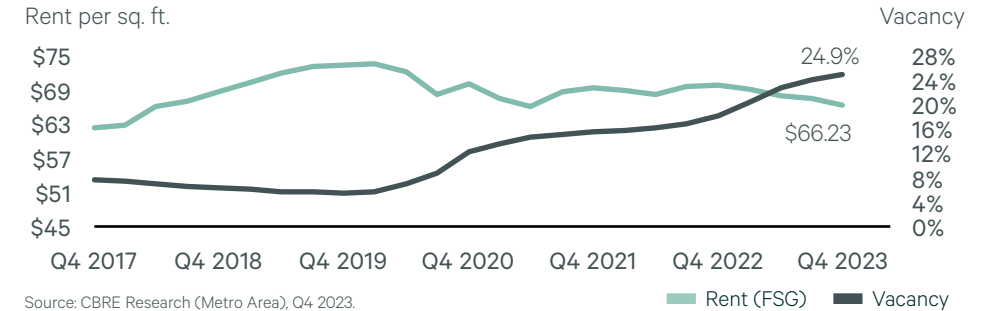
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	5,345	-3%	65%	35%
Math/Statistics	1,419	-2%	65%	35%
Other Tech Engineering	3,109	2%	74%	26%
Totals	9,873	-1%	68%	32%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	5,345	23%	58%	11%	3%	5%
Math/Statistics	1,419	33%	45%	13%	3%	7%
Other Tech Engineering	3,109	29%	45%	16%	3%	7%
Totals	9,873	26%	52%	13%	3%	6%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

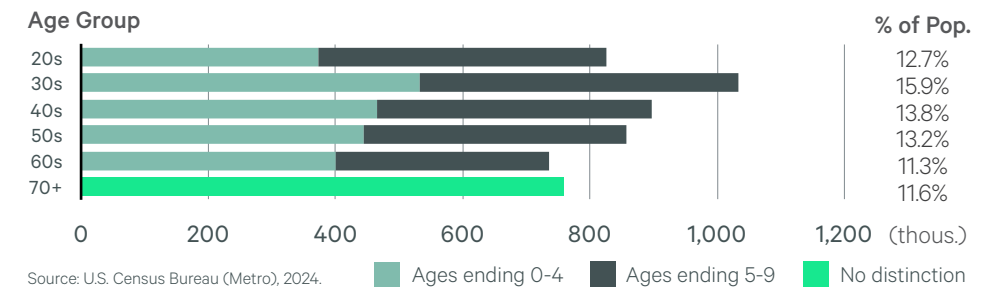
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 111,052 (-11.8%) and 30s declined by 15,340 (-1.5%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

02 Seattle

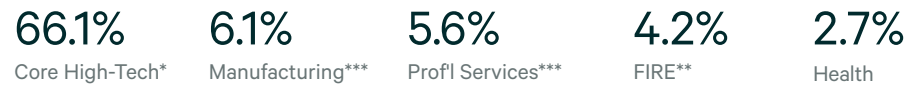
Score
72.15

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	195,390	20.4%	\$147,945	27.4%
Software Developers & Programmers	107,530	34.8%	\$154,358	19.8%
Computer Support, Database & Systems	63,570	8.0%	\$127,453	37.8%
Computer & Information Systems Managers	13,150	12.4%	\$218,640	32.8%
Technology Engineering-Related	11,140	-6.5%	\$123,374	23.8%
Total Non-Tech Occupations	236,760	-0.6%	\$78,738	35.8%
Sales	53,960	15.1%	\$110,329	38.1%
Administrative & Office Support	27,090	7.6%	\$54,744	27.2%
Business Operations & Finance	124,570	-14.3%	\$100,037	22.0%
Marketing	31,140	50.5%	\$110,329	35.4%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



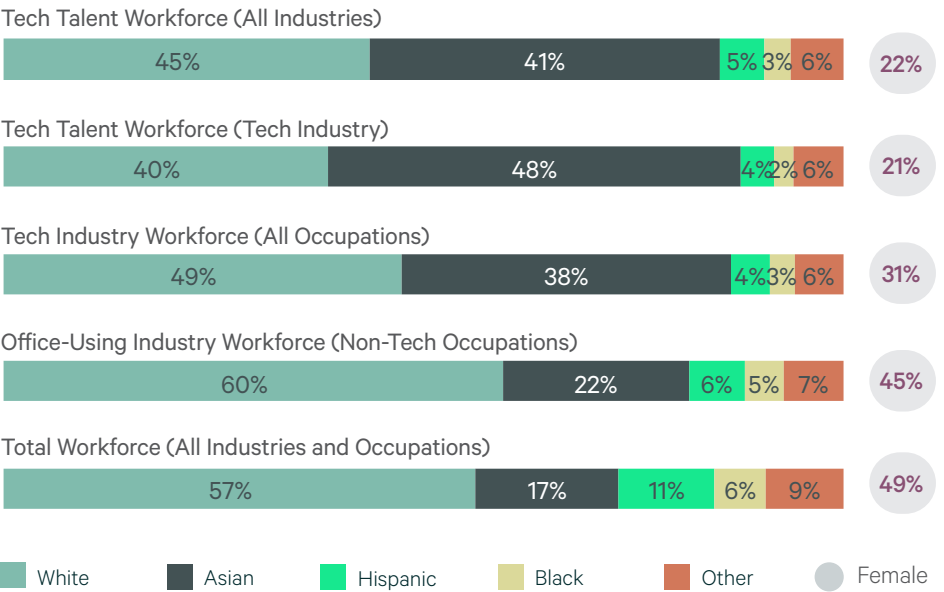
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

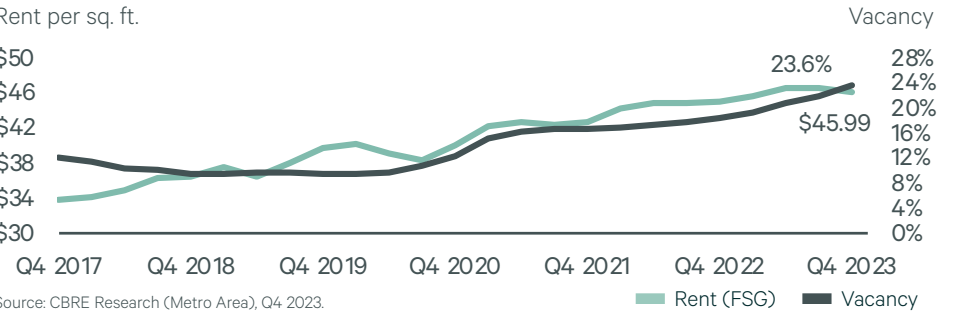
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	3,415	1%	65%	35%
Math/Statistics	729	10%	64%	36%
Other Tech Engineering	1,320	-5%	76%	24%
Totals	5,464	1%	68%	32%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	3,415	41%	38%	7%	6%	8%
Math/Statistics	729	54%	30%	7%	2%	7%
Other Tech Engineering	1,320	51%	30%	8%	3%	9%
Totals	5,464	45%	35%	7%	5%	8%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



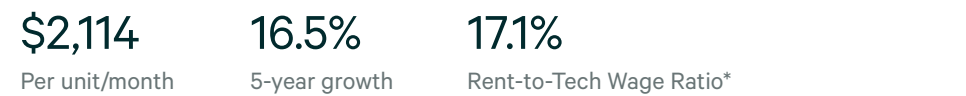
Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



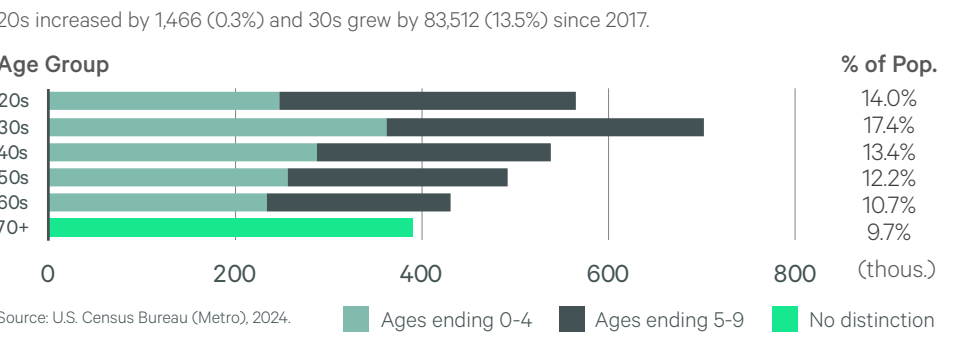
Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)



Source: U.S. Census Bureau (Metro), 2024.

03 New York Metro

Score
67.33

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	389,290	6.1%	\$140,541	27.9%
Software Developers & Programmers	183,360	40.0%	\$142,353	28.2%
Computer Support, Database & Systems	138,230	-22.2%	\$112,565	17.1%
Computer & Information Systems Managers	50,760	55.6%	\$219,810	12.3%
Technology Engineering-Related	16,940	-34.1%	\$116,953	29.4%
Total Non-Tech Occupations	1,151,900	-10.5%	\$78,361	30.4%
Sales	260,870	4.1%	\$110,162	27.3%
Administrative & Office Support	123,920	8.4%	\$50,529	24.4%
Business Operations & Finance	640,070	-20.3%	\$116,058	14.0%
Marketing	127,040	6.7%	\$110,162	41.6%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



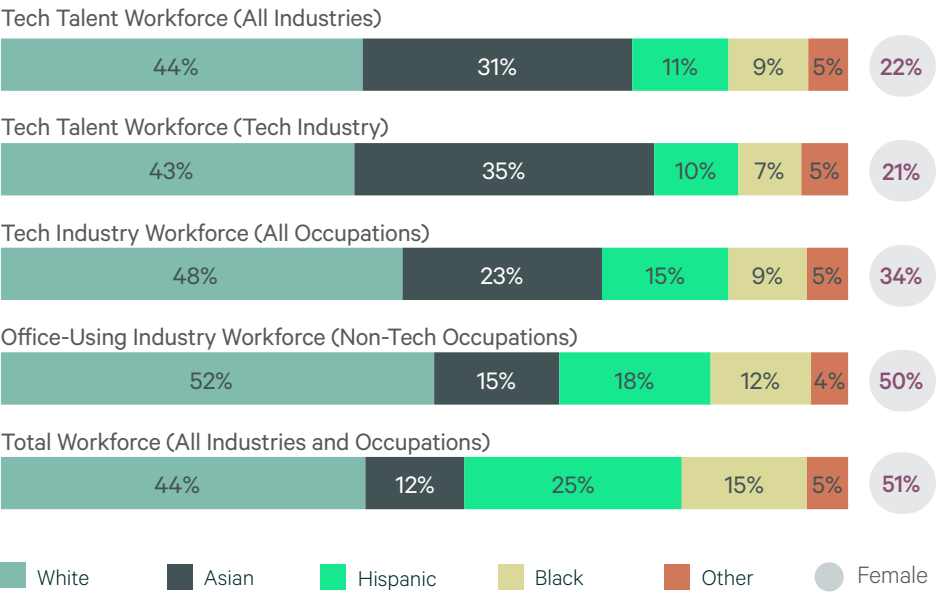
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

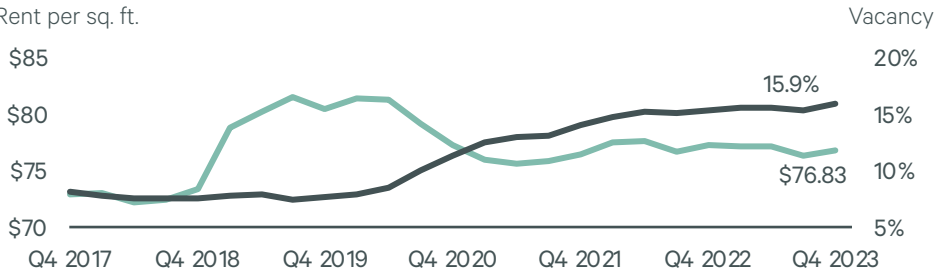
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	13,344	-7%	67%	33%
Math/Statistics	3,495	-14%	59%	41%
Other Tech Engineering	4,009	-7%	80%	20%
Totals	20,848	-8%	68%	32%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	13,344	32%	37%	17%	10%	3%
Math/Statistics	3,495	43%	35%	14%	6%	3%
Other Tech Engineering	4,009	46%	28%	15%	7%	4%
Totals	20,848	37%	35%	16%	9%	3%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



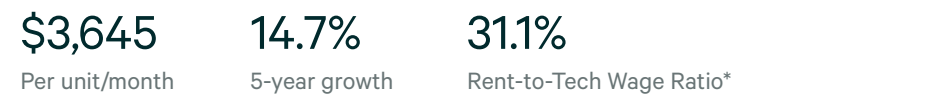
Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



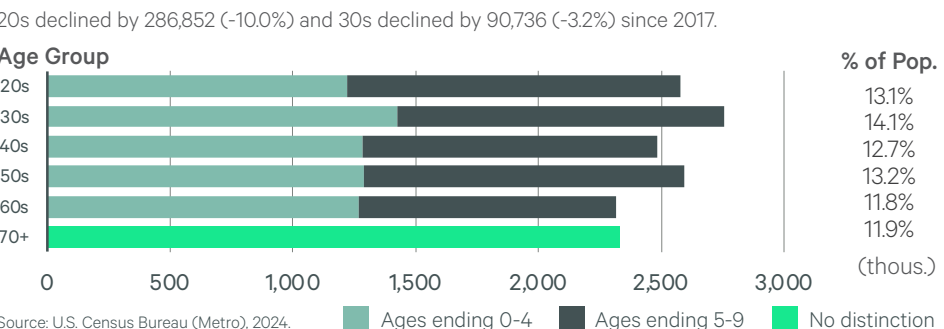
Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)



Source: U.S. Census Bureau (Metro), 2024.

04 Toronto

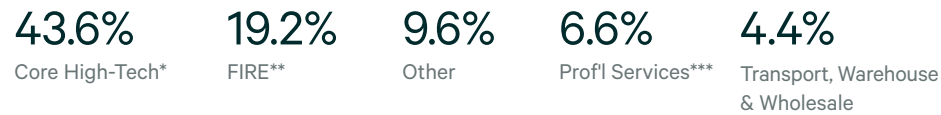
Score
66.85

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	314,100	44.0%	\$105,893	26.2%
Software Developers & Programmers	101,900	44.7%	\$106,600	29.4%
Computer Support, Database & Systems	143,900	45.9%	\$93,392	22.0%
Computer & Information Systems Managers	44,500	89.4%	\$151,882	23.9%
Technology Engineering-Related	23,800	-7.4%	\$92,394	14.2%
Total Non-Tech Occupations	543,100	15.4%	\$75,338	28.1%
Sales	67,500	-10.7%	\$75,962	23.6%
Administrative & Office Support	196,900	-5.9%	\$54,933	17.2%
Business Operations & Finance	168,700	35.9%	\$88,254	25.8%
Marketing	110,000	78.3%	\$91,686	25.1%

*2023; ** 2018-2023; Source: Statistics Canada (Metro Area), April 2024. Data in C\$.

Top 5 Industries for Tech Talent Workforce (2022)



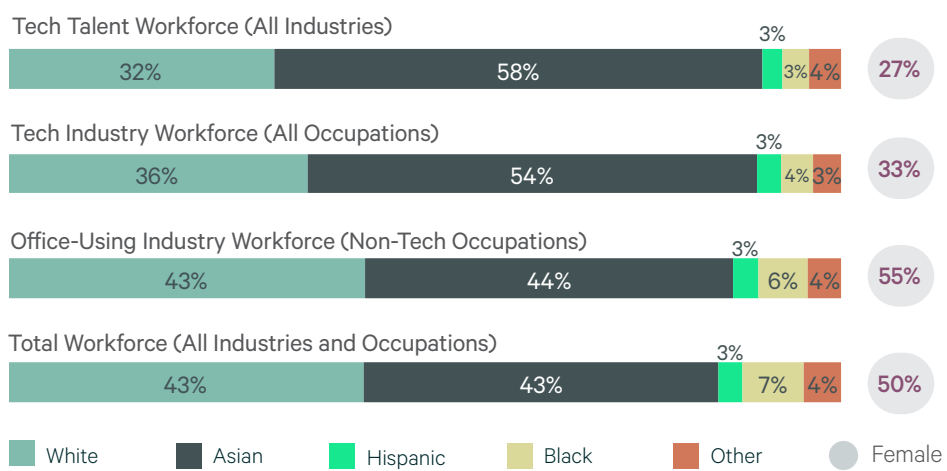
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: Statistics Canada (Metro), April 2024 and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



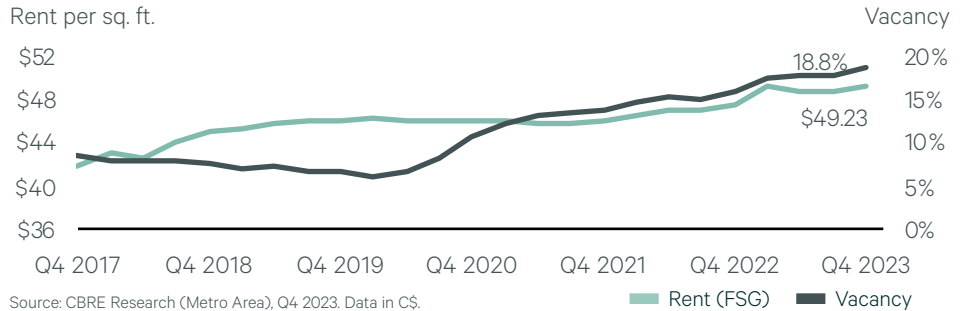
Source: Statistics Canada (Metro) and CBRE Research, April 2024.

Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	3,246	68%	74%	26%
Math/Statistics	1,884	92%	58%	42%
Other Tech Engineering	2,864	8%	77%	23%
Totals	7,994	44%	71%	29%

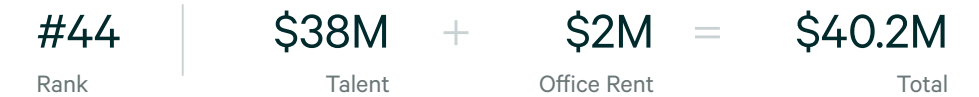
Source: Various Canadian Ministries of Education (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023. Data in C\$.

Annual Operating Costs (2023)



Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

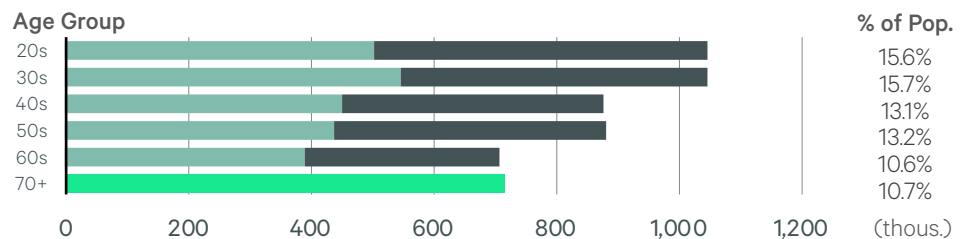
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

Population Trends (2022)

20s grew by 120,832 (13.1%) and 30s grew by 147,224 (16.4%) since 2017.



Source: Statistics Canada (Metro Area), 2024.

05 Austin

Score
66.01

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	99,460	29.1%	\$117,196	29.9%
Software Developers & Programmers	38,260	40.5%	\$123,919	24.1%
Computer Support, Database & Systems	42,280	19.6%	\$99,341	29.7%
Computer & Information Systems Managers	9,850	195.8%	\$180,790	16.3%
Technology Engineering-Related	9,070	-18.8%	\$110,146	22.1%
Total Non-Tech Occupations	164,650	6.4%	\$62,607	17.5%
Sales	31,350	33.2%	\$87,691	1.7%
Administrative & Office Support	13,470	19.4%	\$43,770	16.4%
Business Operations & Finance	92,350	-3.0%	\$85,328	16.6%
Marketing	27,480	10.8%	\$87,691	22.4%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

50.7%	8.8%	7.1%	7.0%	6.0%
Core High-Tech*	FIRE**	Government	Prof'l Services***	Manufacturing***

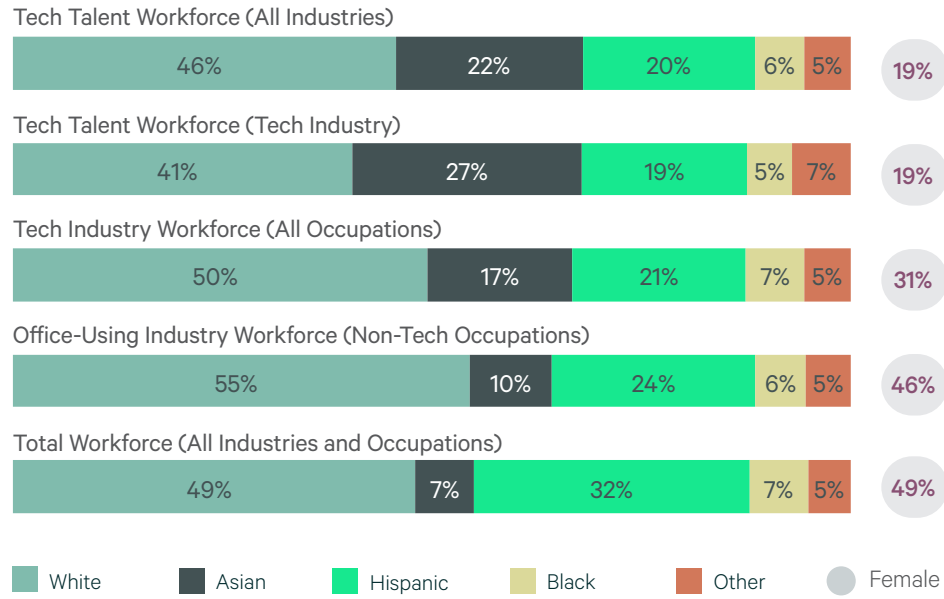
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

62.1% Austin vs 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

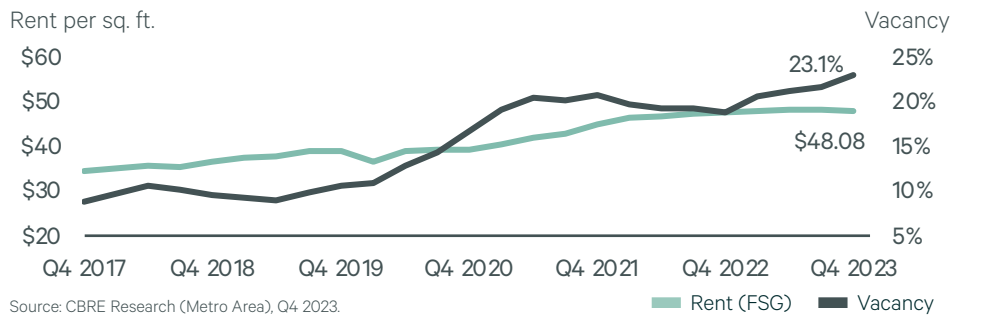
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,255	-3%	74%	26%
Math/Statistics	564	9%	64%	36%
Other Tech Engineering	1,037	-3%	78%	22%
Totals	2,856	-1%	74%	26%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,296	37%	34%	19%	5%	4%
Math/Statistics	564	42%	31%	21%	2%	4%
Other Tech Engineering	1,037	45%	30%	18%	3%	5%
Totals	2,856	41%	32%	19%	4%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#9 Rank | \$57M Talent + \$3M Office Rent = \$59.9M Total

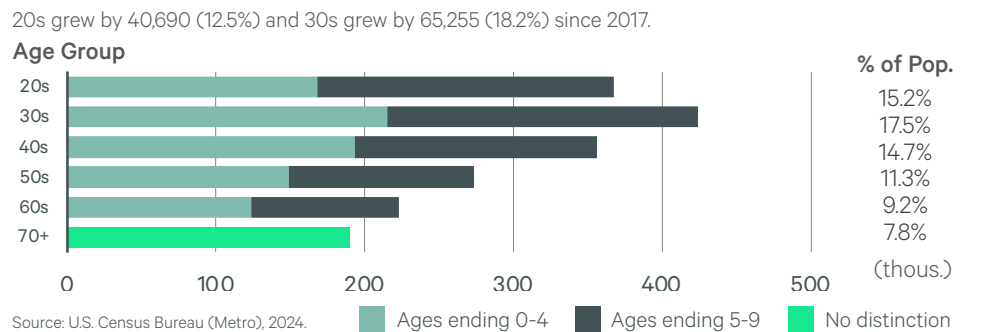
Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

Average Apartment Rent (2023)

\$1,589 Per unit/month | 20.4% 5-year growth | 16.3% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)



Source: U.S. Census Bureau (Metro), 2024.

06 Washington, D.C.

Score
65.19

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	260,430	-6.8%	\$135,106	36.1%
Software Developers & Programmers	100,220	28.0%	\$139,706	35.2%
Computer Support, Database & Systems	127,740	-19.2%	\$123,620	34.1%
Computer & Information Systems Managers	18,760	-0.1%	\$196,320	36.8%
Technology Engineering-Related	13,710	-43.5%	\$130,695	33.6%
Total Non-Tech Occupations	356,440	-14.9%	\$75,043	38.3%
Sales	99,220	3.6%	\$92,074	31.6%
Administrative & Office Support	50,160	-1.0%	\$50,358	36.5%
Business Operations & Finance	170,620	-25.5%	\$102,626	27.8%
Marketing	36,440	-15.8%	\$92,074	31.1%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



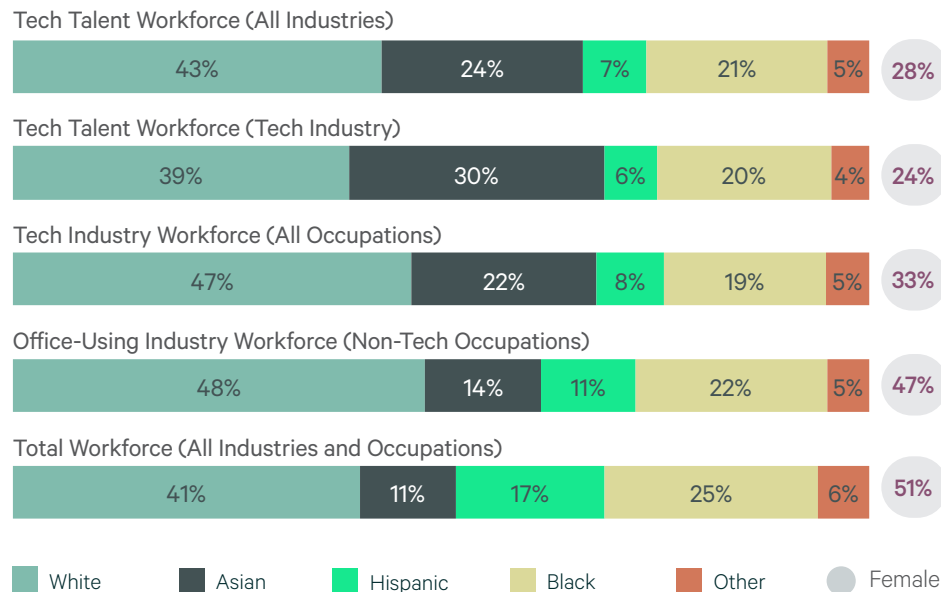
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

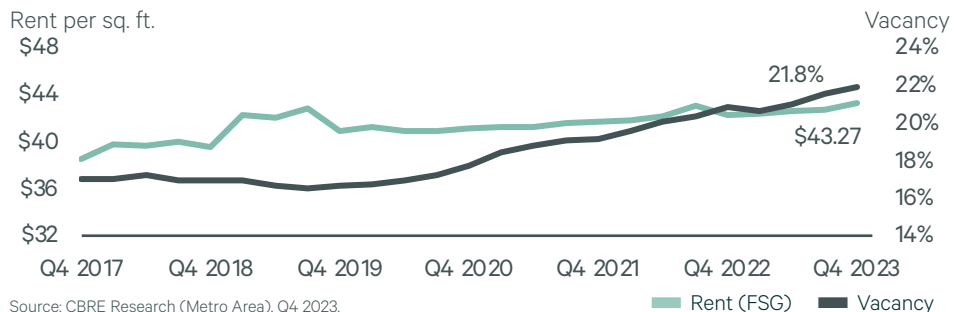
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	10,307	-3%	73%	27%
Math/Statistics	888	-14%	57%	43%
Other Tech Engineering	1,848	-9%	79%	21%
Totals	13,043	-5%	73%	27%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	10,307	41%	18%	10%	25%	5%
Math/Statistics	888	54%	22%	11%	9%	4%
Other Tech Engineering	1,848	62%	15%	9%	10%	5%
Totals	13,043	45%	18%	10%	22%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



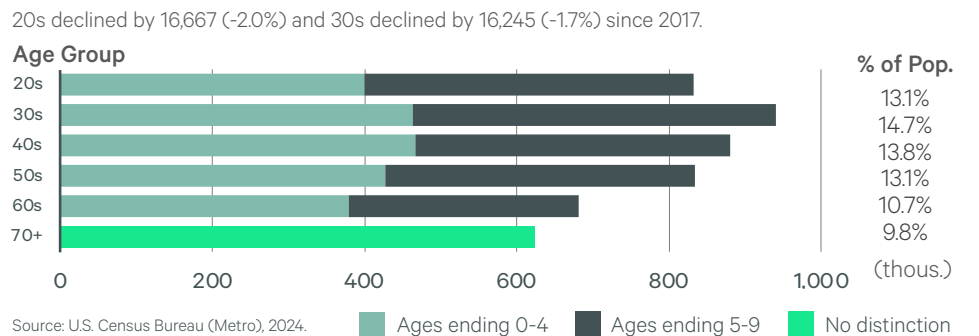
Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)



Source: U.S. Census Bureau (Metro), 2024.

07 Boston

Score
63.73

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	169,830	1.5%	\$134,973	28.5%
Software Developers & Programmers	78,330	25.9%	\$137,109	23.5%
Computer Support, Database & Systems	53,620	-20.4%	\$111,706	25.7%
Computer & Information Systems Managers	22,340	35.1%	\$194,910	21.6%
Technology Engineering-Related	15,540	-26.5%	\$121,077	26.3%
Total Non-Tech Occupations	320,750	-4.0%	\$74,905	24.2%
Sales	83,850	25.9%	\$99,602	14.5%
Administrative & Office Support	32,880	14.0%	\$53,108	19.9%
Business Operations & Finance	170,540	-13.8%	\$99,691	16.0%
Marketing	33,480	-18.0%	\$99,602	36.4%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

44.3% Core High-Tech* **11.9%** FIRE** **11.2%** Prof'l Services*** **7.5%** Manufacturing*** **5.7%** Health

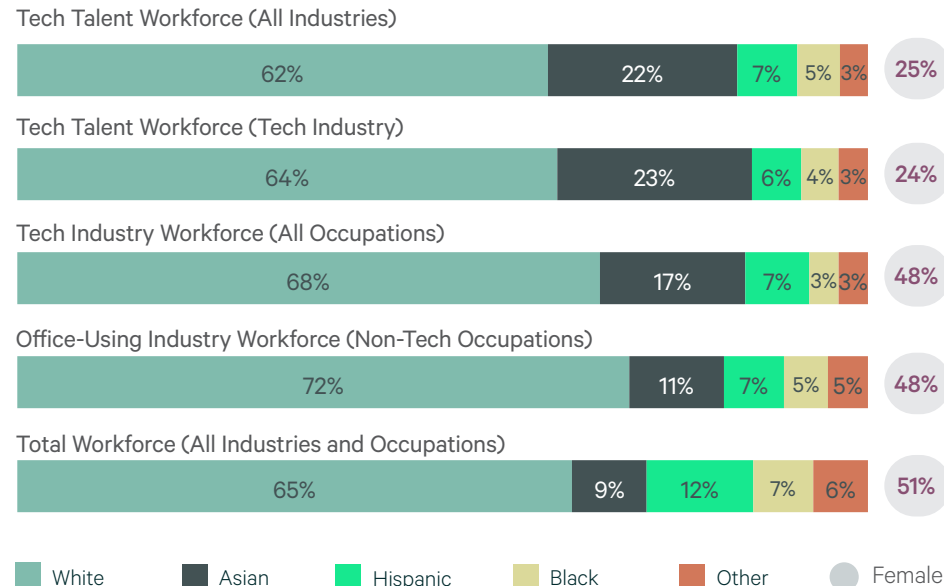
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

59.3% Boston **52.0%** U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

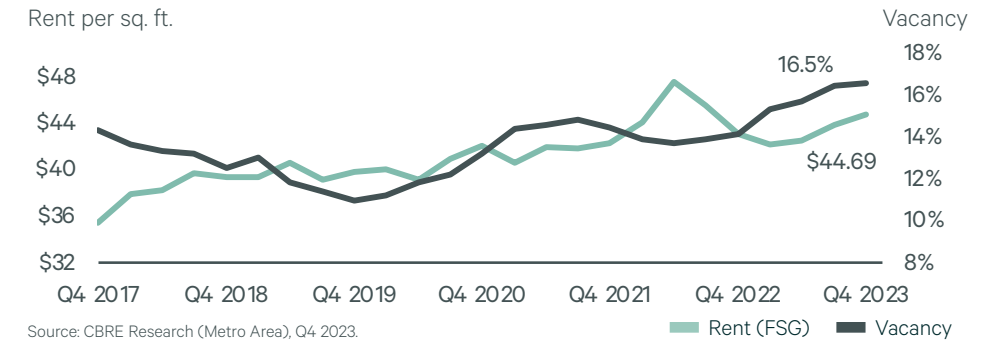
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	7,845	3%	67%	33%
Math/Statistics	1,919	4%	55%	45%
Other Tech Engineering	4,411	2%	70%	30%
Totals	14,175	3%	67%	33%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	7,845	49%	29%	11%	6%	5%
Math/Statistics	1,919	55%	29%	7%	3%	5%
Other Tech Engineering	4,411	62%	18%	10%	5%	6%
Totals	14,175	54%	25%	10%	5%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Annual Operating Costs (2023)

#4 Rank **\$62M** Talent **\$3M** Office Rent **=** **\$64.8M** Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

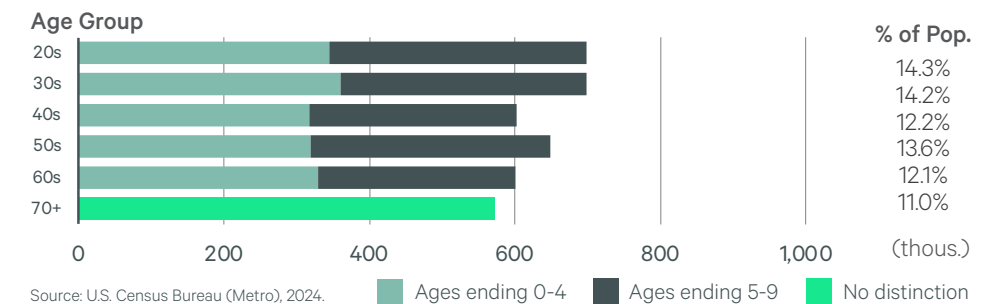
Average Apartment Rent (2023)

\$2,812 Per unit/month **19.9%** 5-year growth **25.0%** Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023) Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 19,835 (-2.8%) and 30s grew by 32,642 (4.9%) since 2017.



08 Denver

Score
62.31

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	129,040	12.6%	\$129,387	36.0%
Software Developers & Programmers	52,510	38.4%	\$139,132	31.4%
Computer Support, Database & Systems	53,090	-14%	\$114,186	35.2%
Computer & Information Systems Managers	10,050	56.8%	\$185,890	22.5%
Technology Engineering-Related	13,390	-18.7%	\$119,584	43.7%
Total Non-Tech Occupations	230,180	1.8%	\$77,496	35.1%
Sales	56,650	19.2%	\$109,308	30.5%
Administrative & Office Support	28,500	25.9%	\$48,751	25.3%
Business Operations & Finance	106,290	-14.1%	\$93,670	14.6%
Marketing	38,740	20.0%	\$109,308	57.3%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



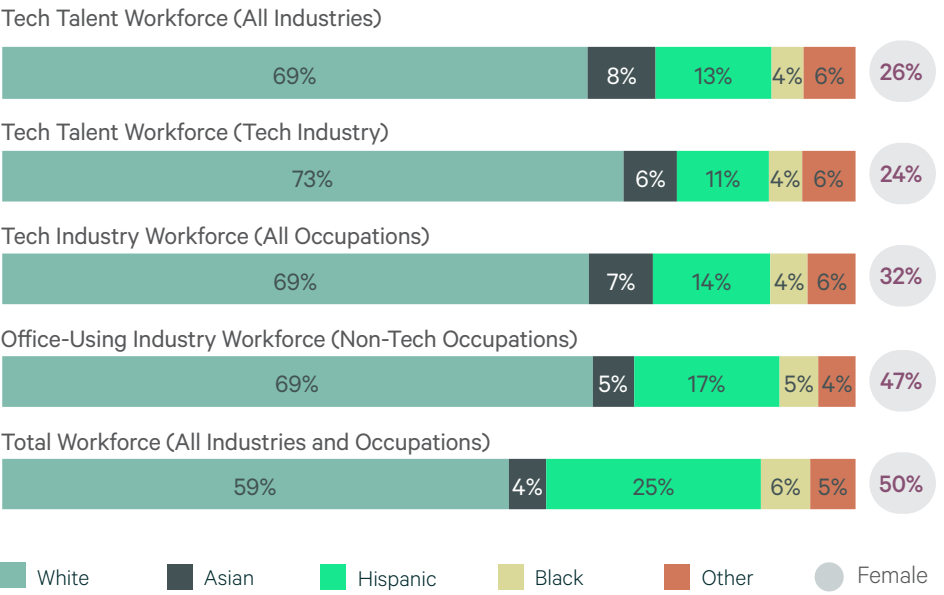
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

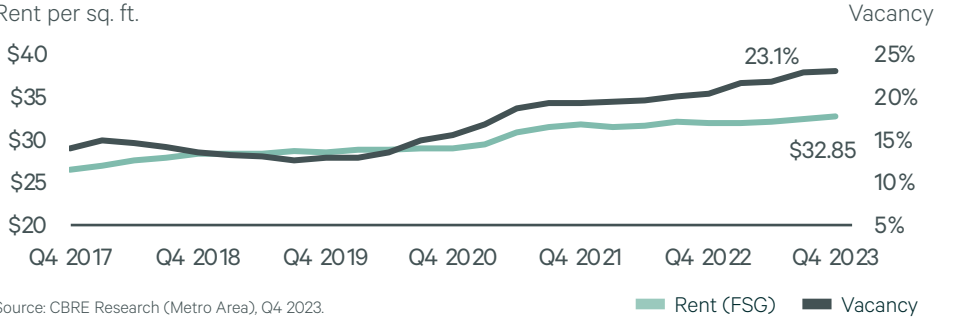
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	2,397	9%	74%	26%
Math/Statistics	425	-16%	68%	32%
Other Tech Engineering	1,892	5%	79%	21%
Totals	4,714	5%	76%	24%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	2,397	63%	13%	13%	6%	5%
Math/Statistics	425	73%	9%	10%	1%	8%
Other Tech Engineering	1,892	75%	6%	12%	1%	6%
Totals	4,714	69%	10%	12%	3%	6%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends

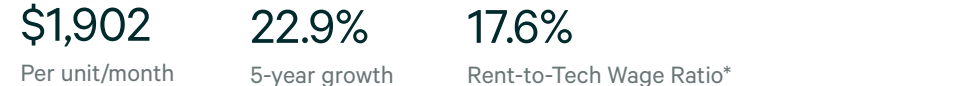


Annual Operating Costs (2023)



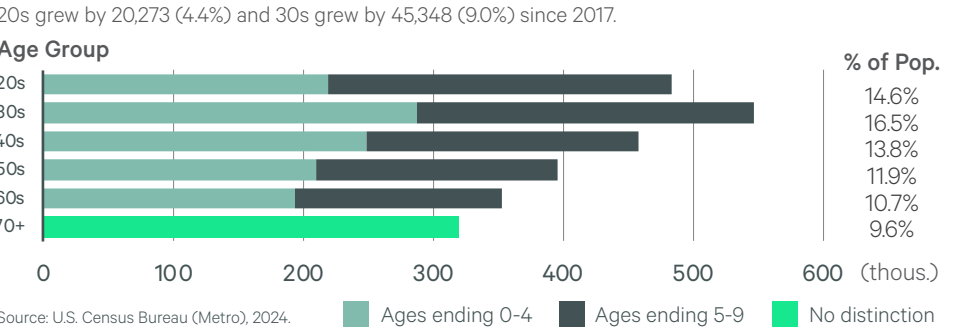
Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)



09 Dallas-Ft. Worth

Score
61.07

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	227,640	25.6%	\$116,038	21.6%
Software Developers & Programmers	87,070	46.9%	\$118,802	11.3%
Computer Support, Database & Systems	100,320	7.2%	\$102,033	21.2%
Computer & Information Systems Managers	24,680	173.9%	\$175,830	10.1%
Technology Engineering-Related	15,570	-19.9%	\$101,623	18.8%
Total Non-Tech Occupations	476,130	-3.7%	\$60,192	21.3%
Sales	96,040	23.6%	\$88,885	21.6%
Administrative & Office Support	31,300	17.2%	\$43,784	16.8%
Business Operations & Finance	291,310	-13.4%	\$83,438	4.6%
Marketing	57,480	7.5%	\$88,885	30.9%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



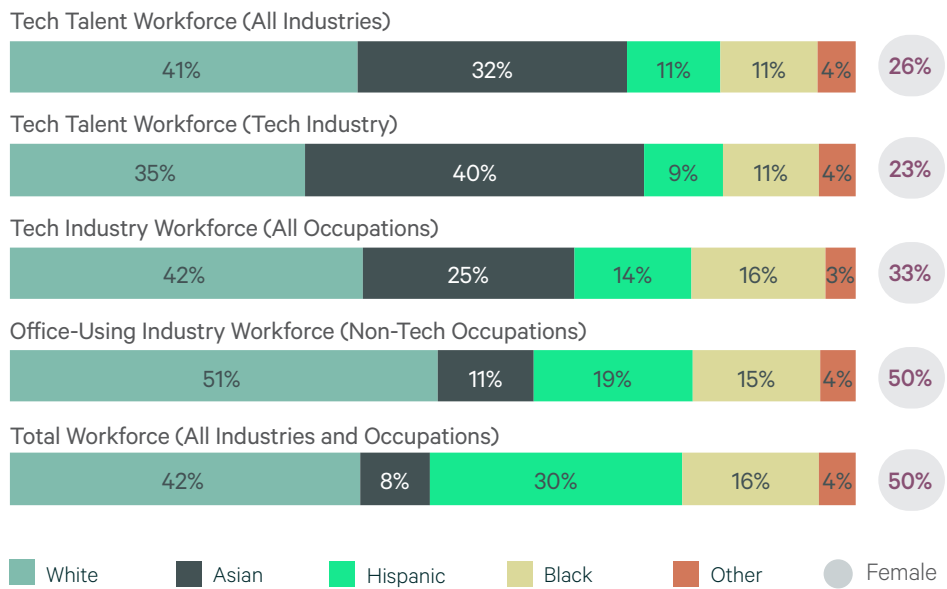
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

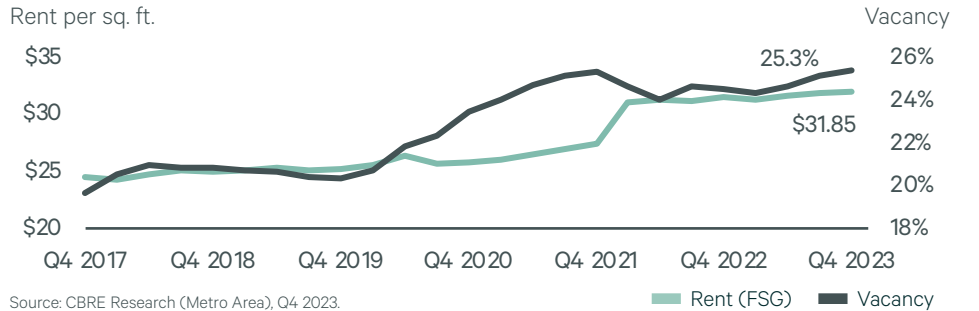
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	4,362	-3%	70%	30%
Math/Statistics	871	-2%	61%	39%
Other Tech Engineering	1,581	-18%	81%	19%
Totals	6,814	-7%	72%	28%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	4,362	36%	35%	17%	9%	4%
Math/Statistics	871	52%	17%	19%	6%	6%
Other Tech Engineering	1,581	47%	19%	24%	7%	4%
Totals	6,814	41%	28%	19%	8%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



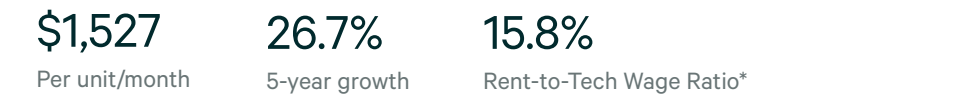
Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



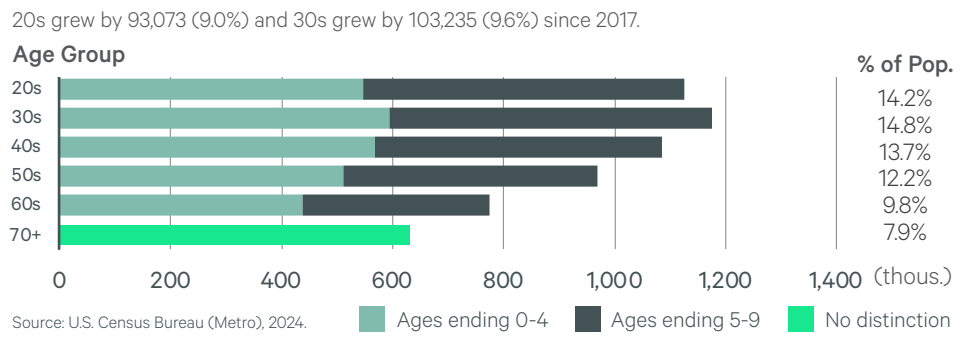
Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)



Source: U.S. Census Bureau (Metro), 2024.

10 Ottawa

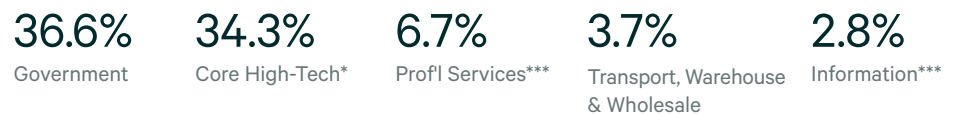
Score
57.06

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	91,500	51.7%	\$106,267	17.7%
Software Developers & Programmers	31,100	84.0%	\$115,357	23.2%
Computer Support, Database & Systems	37,600	33.8%	\$90,688	13.1%
Computer & Information Systems Managers	10,200	54.5%	\$131,726	10.2%
Technology Engineering-Related	12,600	44.8%	\$109,845	17.0%
Total Non-Tech Occupations	110,600	11.2%	\$75,150	15.8%
Sales	8,600	-23.2%	\$82,701	15.4%
Administrative & Office Support	40,500	-1.7%	\$60,278	20.3%
Business Operations & Finance	43,700	33.6%	\$84,573	14.9%
Marketing	17,800	23.6%	\$82,202	0.1%

*2023; ** 2018-2023; Source: Statistics Canada (Metro Area), April 2024. Data in C\$.

Top 5 Industries for Tech Talent Workforce (2022)



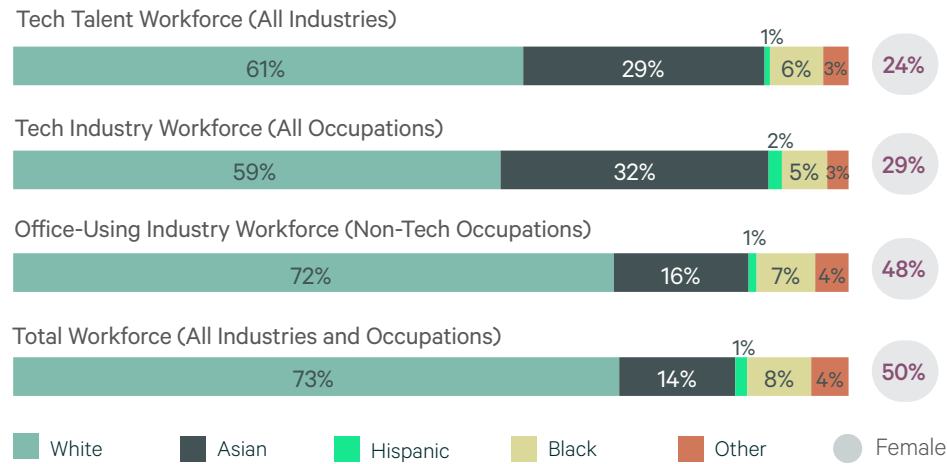
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: Statistics Canada (Metro), April 2024 and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



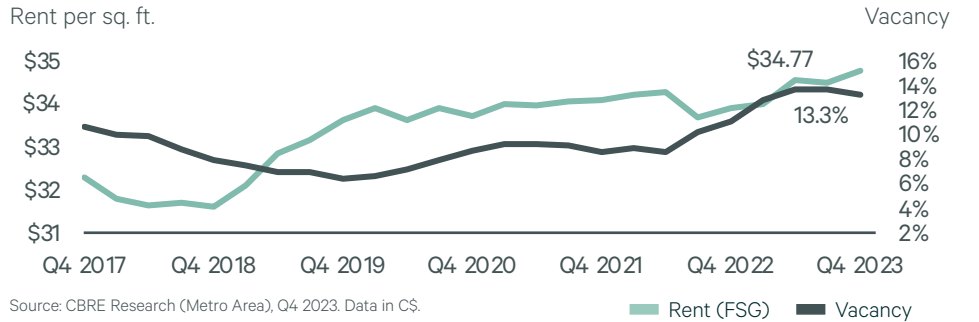
Source: Statistics Canada (Metro) and CBRE Research, April 2024.

Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,114	115%	81%	19%
Math/Statistics	229	54%	53%	47%
Other Tech Engineering	1,210	21%	78%	23%
Totals	2,553	53%	77%	23%

Source: Various Canadian Ministries of Education (Region), 2024.

Office Rent & Vacancy Trends



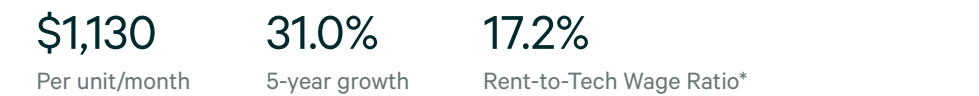
Source: CBRE Research (Metro Area), Q4 2023. Data in C\$.

Annual Operating Costs (2023)



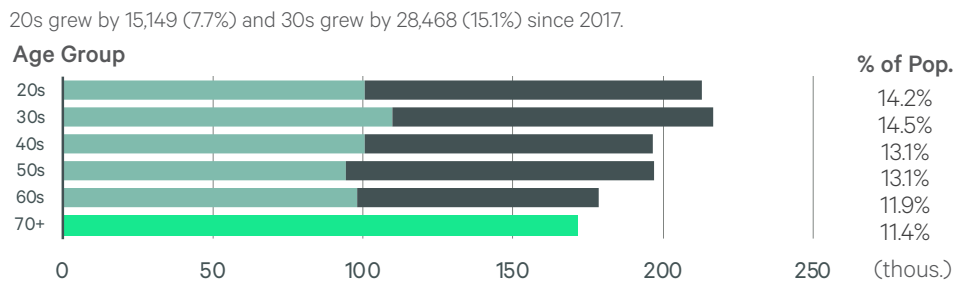
Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

Population Trends (2022)



Source: Statistics Canada (Metro Area), 2024. Legend: Ages ending 0-4, Ages ending 5-9, No distinction.

11 Vancouver

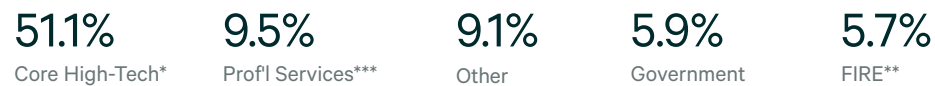
Score
56.04

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	98,700	30.7%	\$109,990	36.6%
Software Developers & Programmers	39,900	38.5%	\$120,848	41.5%
Computer Support, Database & Systems	34,000	21.4%	\$91,936	20.9%
Computer & Information Systems Managers	12,500	166.0%	\$140,109	59.3%
Technology Engineering-Related	12,300	-12.1%	\$93,870	21.9%
Total Non-Tech Occupations	212,300	17.5%	\$71,635	23.0%
Sales	28,300	-13.7%	\$82,243	24.6%
Administrative & Office Support	84,200	10.2%	\$55,141	16.8%
Business Operations & Finance	55,900	16.7%	\$81,578	26.3%
Marketing	43,900	86.0%	\$83,782	19.2%

*2023; ** 2018-2023; Source: Statistics Canada (Metro Area), April 2024. Data in C\$.

Top 5 Industries for Tech Talent Workforce (2022)



*Includes computer software and services and computer product manufacturing;

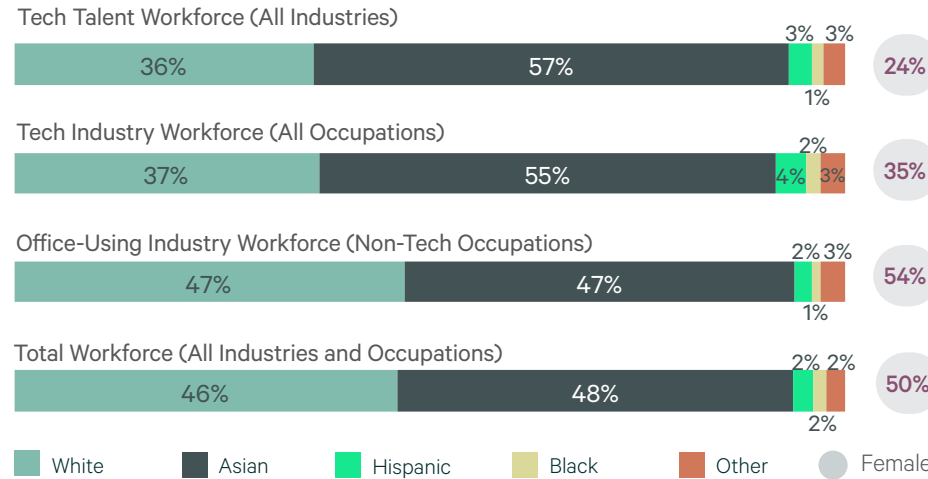
Finance, Insurance, Real Estate; *Excl high-tech. Source: Statistics Canada (Metro), April 2024 and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



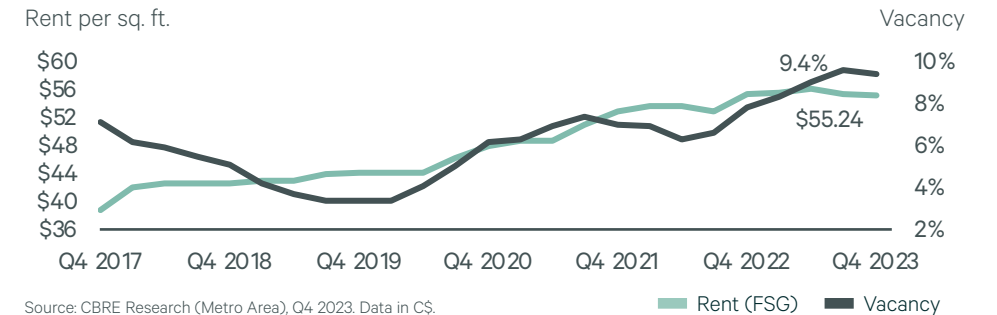
Source: Statistics Canada (Metro) and CBRE Research, April 2024.

Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,812	54%	70%	30%
Math/Statistics	553	103%	56%	44%
Other Tech Engineering	1,112	8%	79%	21%
Totals	3,477	40%	71%	29%

Source: Various Canadian Ministries of Education (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023. Data in C\$.

Annual Operating Costs (2023)



Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

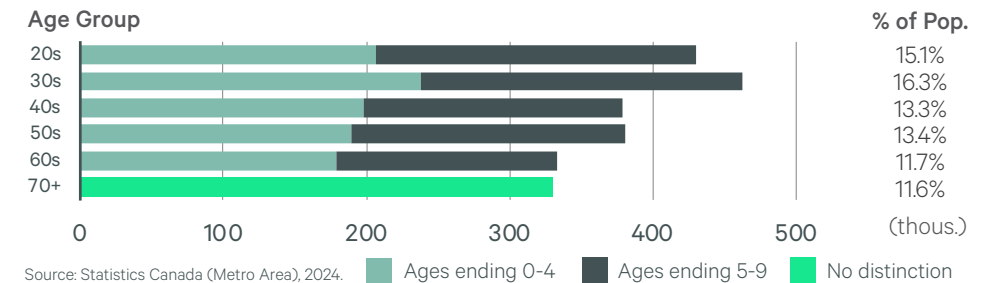
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023)
Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

Population Trends (2022)

20s grew by 39,198 (10.0%) and 30s grew by 71,870 (18.4%) since 2017.



Source: Statistics Canada (Metro Area), 2024. Legend: Ages ending 0-4, Ages ending 5-9, No distinction

12 Salt Lake City

Score
56.03

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	57,560	12.9%	\$107,202	24.9%
Software Developers & Programmers	30,620	66.6%	\$113,656	17.2%
Computer Support, Database & Systems	21,540	-8.8%	\$94,386	31.3%
Computer & Information Systems Managers	1,860	-60.3%	\$165,985	26.7%
Technology Engineering-Related	3,540	-17.7%	\$99,467	51.6%
Total Non-Tech Occupations	163,640	14.9%	\$56,236	31.4%
Sales	29,360	57.7%	\$79,068	14.8%
Administrative & Office Support	15,370	46.1%	\$42,858	26.5%
Business Operations & Finance	101,990	2.2%	\$77,594	19.6%
Marketing	16,920	25.3%	\$79,068	44.9%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

44.7%	14.7%	9.1%	7.5%	4.6%
Core High-Tech*	FIRE**	Prof'l Services***	Education	Manufacturing***

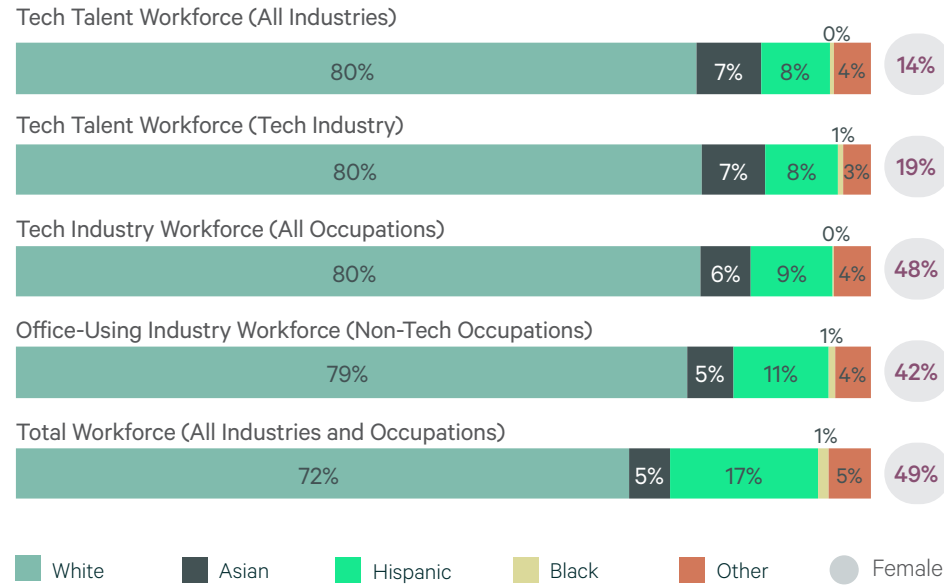
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

57.0% Salt Lake City vs 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

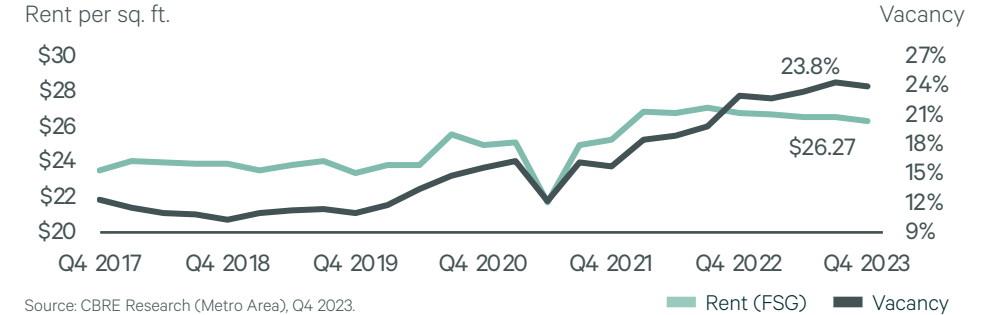
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	7,646	3%	83%	17%
Math/Statistics	456	-7%	68%	32%
Other Tech Engineering	739	3%	88%	12%
Totals	8,841	3%	83%	17%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	7,646	69%	8%	10%	8%	5%
Math/Statistics	456	84%	5%	6%	0%	5%
Other Tech Engineering	739	84%	5%	7%	0%	4%
Totals	8,841	71%	7%	10%	7%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#27 Rank | \$49M Talent + \$1M Office Rent = \$50.5M Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

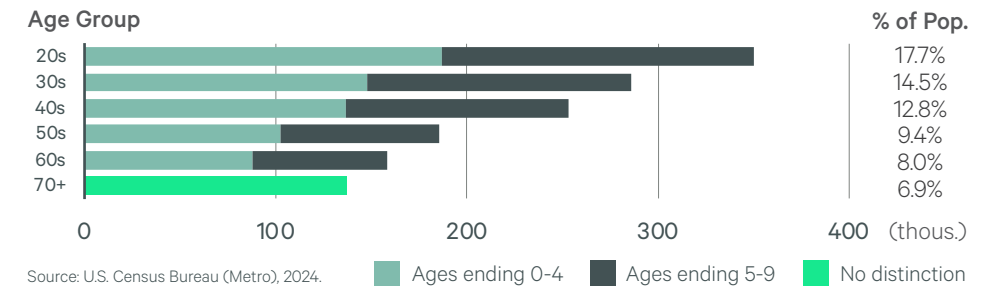
Average Apartment Rent (2023)

\$1,554 Per unit/month | 31.6% 5-year growth | 17.4% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 37,625 (12.0%) and 30s grew by 16,757 (6.2%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

13 Atlanta

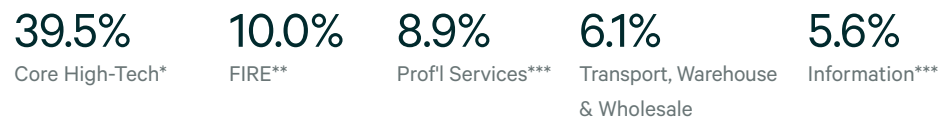
Score
55.98

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	138,080	-7.1%	\$114,747	22.1%
Software Developers & Programmers	57,940	26.8%	\$120,154	16.4%
Computer Support, Database & Systems	60,150	-23.3%	\$98,304	18.2%
Computer & Information Systems Managers	12,010	0.0%	\$179,930	22.3%
Technology Engineering-Related	7,980	-36.1%	\$111,163	44.6%
Total Non-Tech Occupations	351,860	12.6%	\$59,083	23.9%
Sales	72,610	22.0%	\$80,512	4.0%
Administrative & Office Support	28,380	10.4%	\$42,904	18.1%
Business Operations & Finance	211,770	-0.9%	\$86,351	17.2%
Marketing	39,100	187.5%	\$80,512	21.5%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



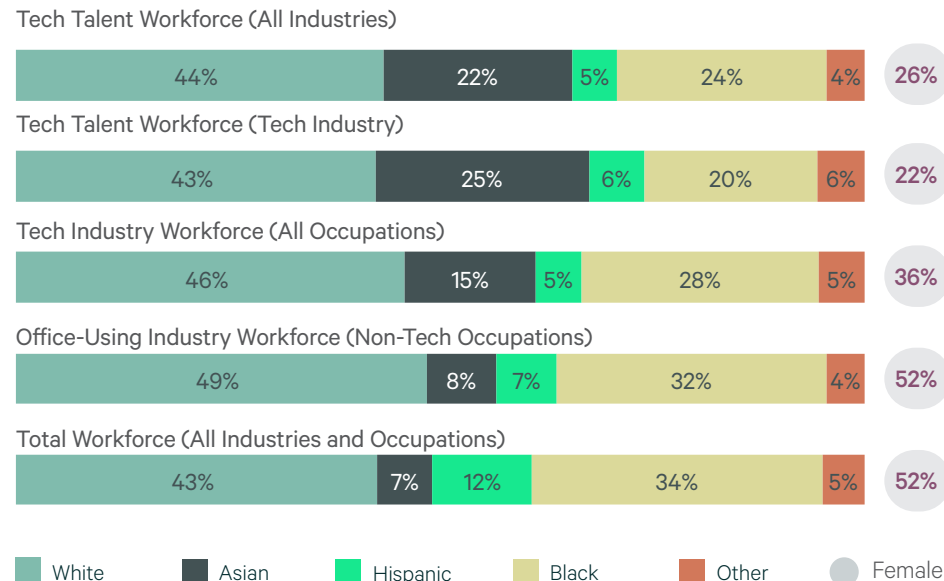
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

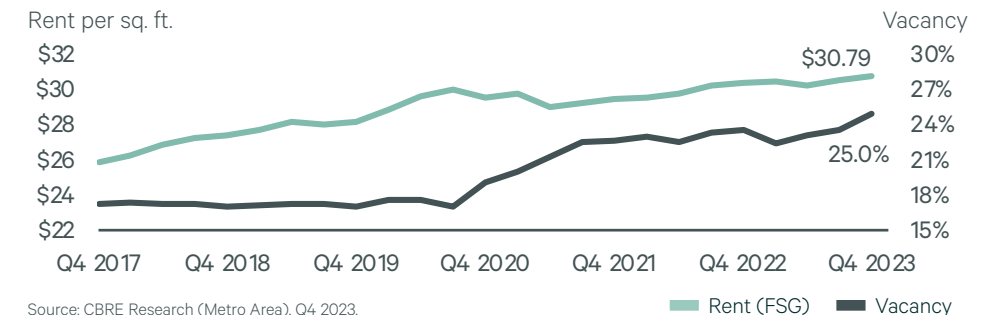
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	6,195	9%	75%	25%
Math/Statistics	670	11%	58%	42%
Other Tech Engineering	2,827	1%	75%	25%
Totals	9,692	7%	74%	26%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	6,195	41%	30%	8%	17%	5%
Math/Statistics	670	47%	26%	8%	17%	3%
Other Tech Engineering	2,827	54%	23%	11%	8%	5%
Totals	9,692	45%	27%	9%	14%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

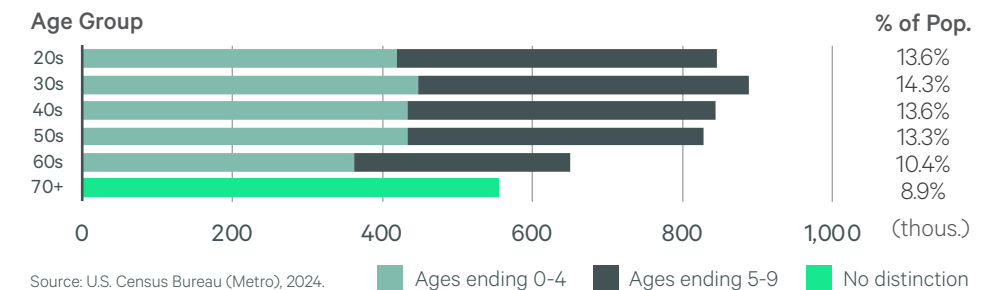
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 40,846 (5.1%) and 30s grew by 51,047 (6.1%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

14 Los Angeles-Orange County

Score
54.11

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	258,640	12.6%	\$124,461	23.4%
Software Developers & Programmers	117,290	56.4%	\$126,956	15.4%
Computer Support, Database & Systems	89,700	-12.8%	\$104,791	25.4%
Computer & Information Systems Managers	25,820	43.5%	\$188,405	12.2%
Technology Engineering-Related	25,830	-23.8%	\$119,381	22.9%
Total Non-Tech Occupations	672,150	-6.0%	\$64,889	21.7%
Sales	135,150	17.5%	\$85,354	16.1%
Administrative & Office Support	69,190	17.1%	\$50,031	22.3%
Business Operations & Finance	410,860	-12.1%	\$90,954	9.3%
Marketing	56,950	-22.9%	\$85,354	25.7%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



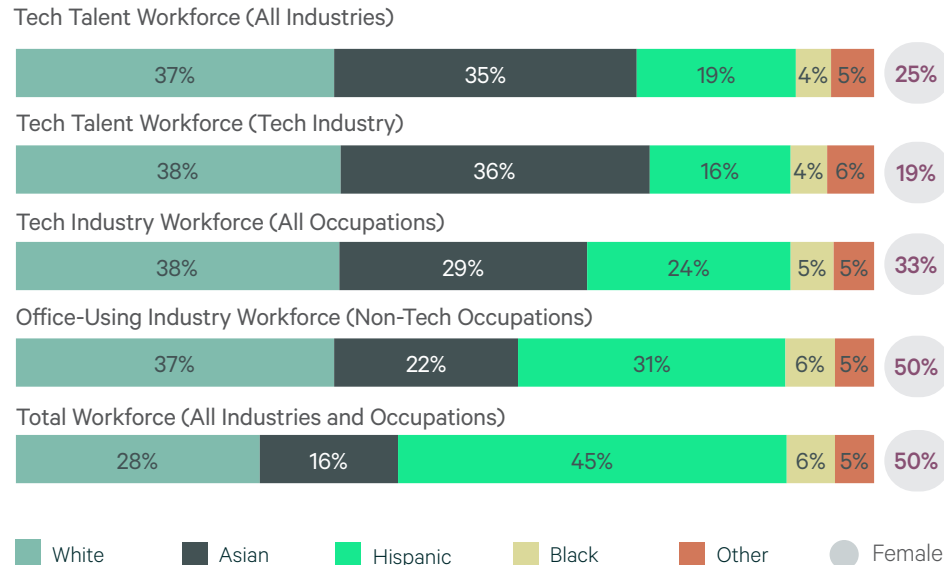
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

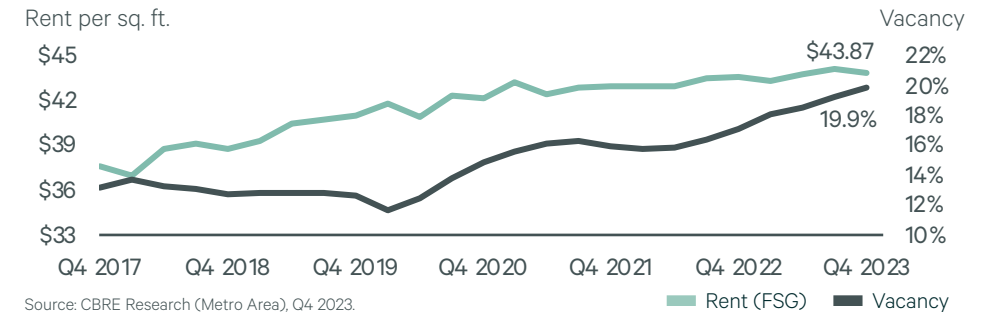
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	6,872	-6%	74%	26%
Math/Statistics	2,733	6%	61%	39%
Other Tech Engineering	4,862	-6%	79%	21%
Totals	14,467	-4%	73%	27%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	6,872	23%	46%	22%	3%	6%
Math/Statistics	2,733	28%	37%	26%	2%	6%
Other Tech Engineering	4,862	33%	28%	30%	2%	7%
Totals	14,467	28%	38%	26%	2%	6%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



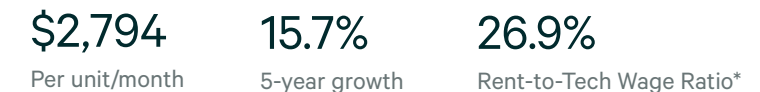
Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

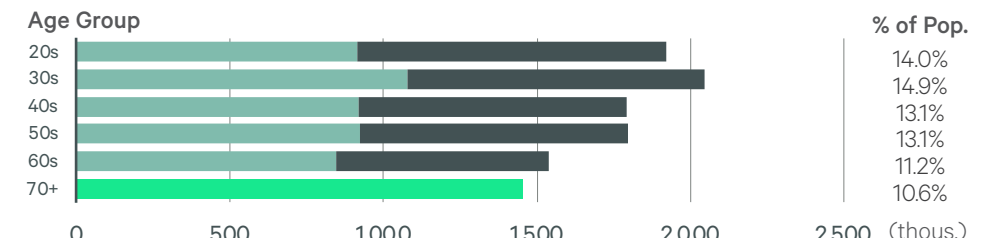
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 242,795 (-11.2%) and 30s grew by 14,375 (0.7%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

15 Montreal

Score
53.49

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	166,600	30.3%	\$96,262	26.3%
Software Developers & Programmers	49,400	32.8%	\$99,570	39.2%
Computer Support, Database & Systems	78,600	28.0%	\$86,882	17.5%
Computer & Information Systems Managers	13,800	34.0%	\$148,283	23.1%
Technology Engineering-Related	24,800	30.5%	\$90,480	32.0%
Total Non-Tech Occupations	335,100	10.1%	\$69,576	23.3%
Sales	47,200	-7.8%	\$76,315	29.4%
Administrative & Office Support	131,200	-8.2%	\$54,101	19.6%
Business Operations & Finance	101,800	46.5%	\$79,851	14.4%
Marketing	54,900	34.9%	\$81,723	17.6%

*2023; ** 2018-2023; Source: Statistics Canada (Metro Area), April 2024. Data in C\$.

Top 5 Industries for Tech Talent Workforce (2022)



*Includes computer software and services and computer product manufacturing;

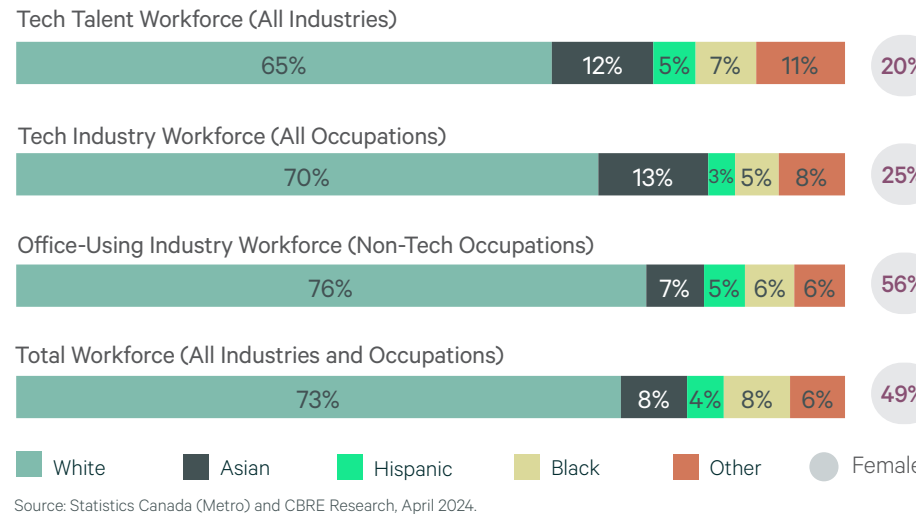
Finance, Insurance, Real Estate; *Excl high-tech. Source: Statistics Canada (Metro), April 2024 and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)

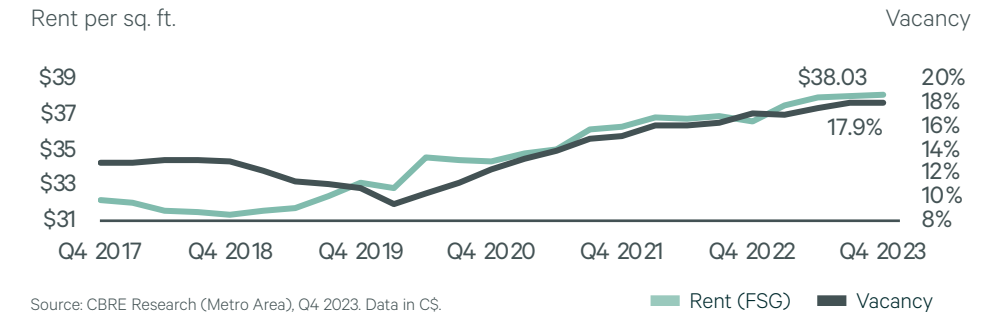


Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	2,558	86%	77%	23%
Math/Statistics	378	26%	59%	41%
Other Tech Engineering	2,950	14%	78%	22%
Totals	5,886	38%	76%	24%

Source: Various Canadian Ministries of Education (Region), 2024.

Office Rent & Vacancy Trends



Annual Operating Costs (2023)



Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

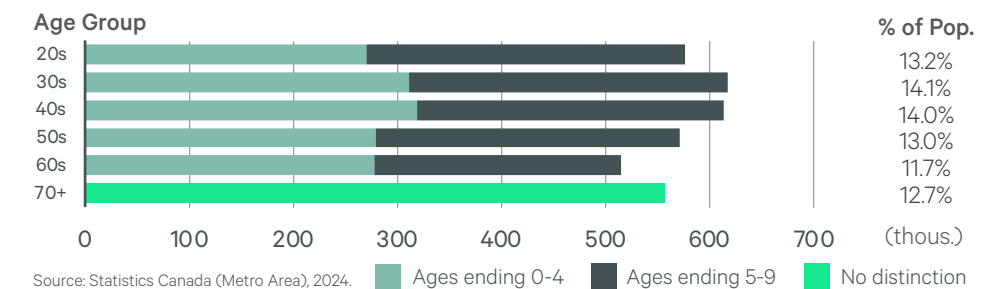
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023)
Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

Population Trends (2022)

20s declined by 0,093 (0.0%) and 30s grew by 18,831 (3.1%) since 2017.



16 Raleigh-Durham

Score
52.87

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	75,150	17.9%	\$122,240	30.8%
Software Developers & Programmers	32,230	33.3%	\$129,440	27.6%
Computer Support, Database & Systems	29,440	-3.0%	\$103,448	24.8%
Computer & Information Systems Managers	8,010	68.6%	\$178,650	20.6%
Technology Engineering-Related	5,470	22.1%	\$118,198	83.6%
Total Non-Tech Occupations	130,790	5.3%	\$66,573	28.1%
Sales	27,060	34.8%	\$99,710	19.9%
Administrative & Office Support	13,120	28.4%	\$44,289	19.0%
Business Operations & Finance	71,130	-8.1%	\$85,230	15.0%
Marketing	19,480	17.5%	\$99,710	43.5%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)

Tech Talent Workforce (All Industries)



Tech Talent Workforce (Tech Industry)



Tech Industry Workforce (All Occupations)



Office-Using Industry Workforce (Non-Tech Occupations)



Total Workforce (All Industries and Occupations)



White Asian Hispanic Black Other Female

Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

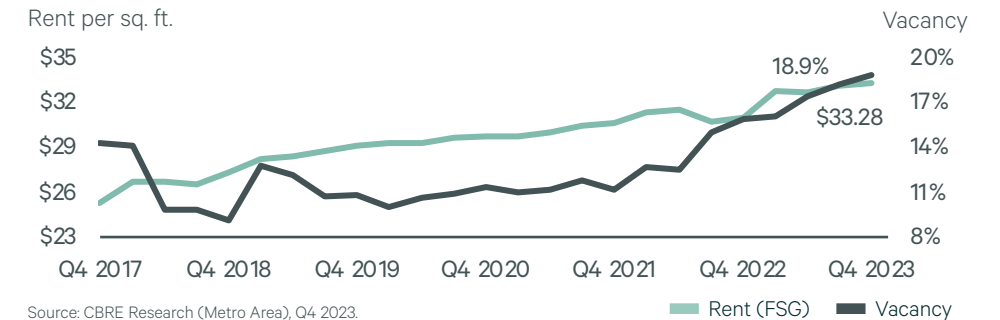
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	2,048	-7%	69%	31%
Math/Statistics	898	-5%	59%	41%
Other Tech Engineering	1,227	-17%	79%	21%
Totals	4,173	-10%	70%	30%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	2,048	52%	29%	6%	8%	4%
Math/Statistics	898	59%	26%	7%	3%	4%
Other Tech Engineering	1,227	75%	9%	8%	4%	4%
Totals	4,173	60%	23%	7%	6%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



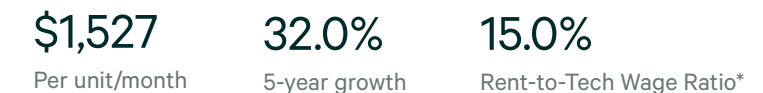
Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

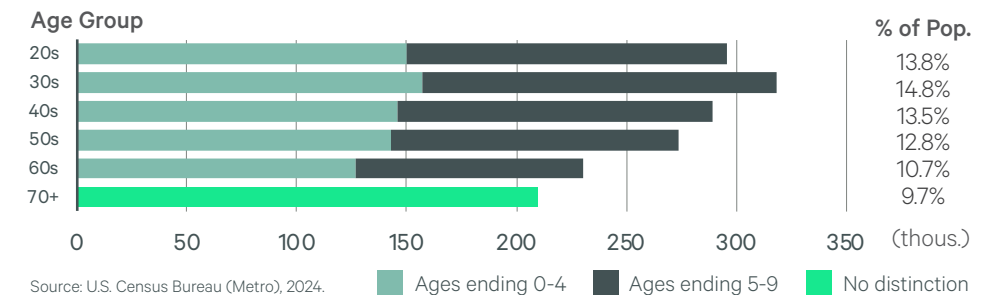
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 28,753 (10.8%) and 30s grew by 45,726 (16.8%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

17 San Diego

Score
51.74

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	80,400	3.2%	\$131,460	26.5%
Software Developers & Programmers	32,300	25.9%	\$138,100	28.7%
Computer Support, Database & Systems	27,410	-2.1%	\$106,098	15.7%
Computer & Information Systems Managers	7,190	35.4%	\$198,730	26.1%
Technology Engineering-Related	13,500	-28.6%	\$133,825	30.8%
Total Non-Tech Occupations	146,990	-4.3%	\$66,554	29.8%
Sales	29,940	28.6%	\$91,475	39.6%
Administrative & Office Support	12,960	3.3%	\$49,463	22.8%
Business Operations & Finance	88,610	-11.3%	\$93,464	17.0%
Marketing	15,480	-13.4%	\$91,475	39.7%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



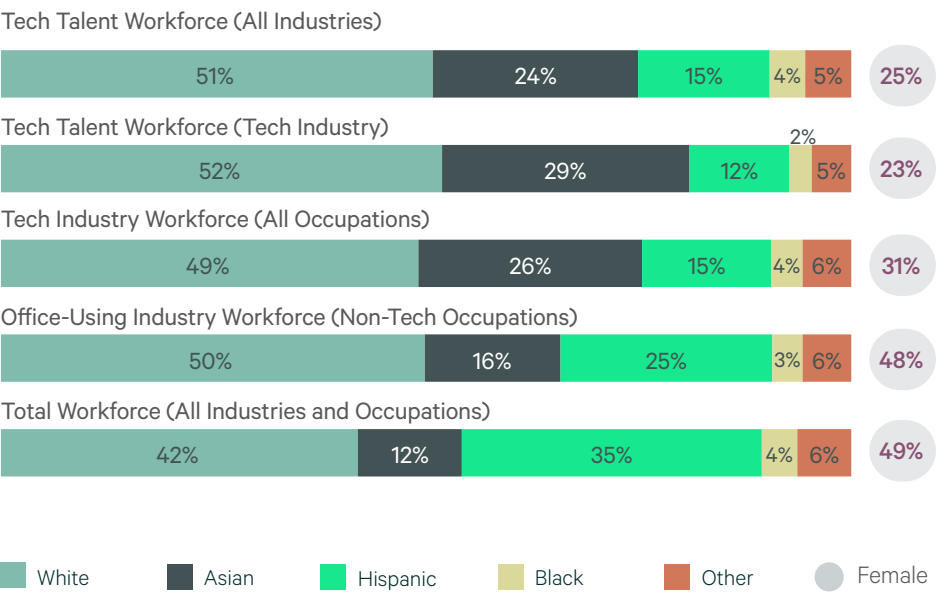
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

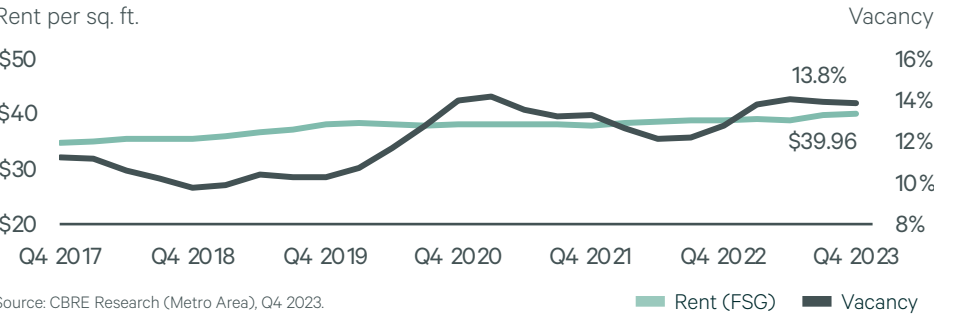
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	2,477	-5%	78%	22%
Math/Statistics	1,140	7%	60%	40%
Other Tech Engineering	1,528	-14%	81%	19%
Totals	5,145	-6%	75%	25%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	2,477	32%	39%	17%	6%	6%
Math/Statistics	1,140	33%	35%	23%	2%	7%
Other Tech Engineering	1,528	38%	28%	24%	2%	8%
Totals	5,145	34%	35%	20%	4%	7%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



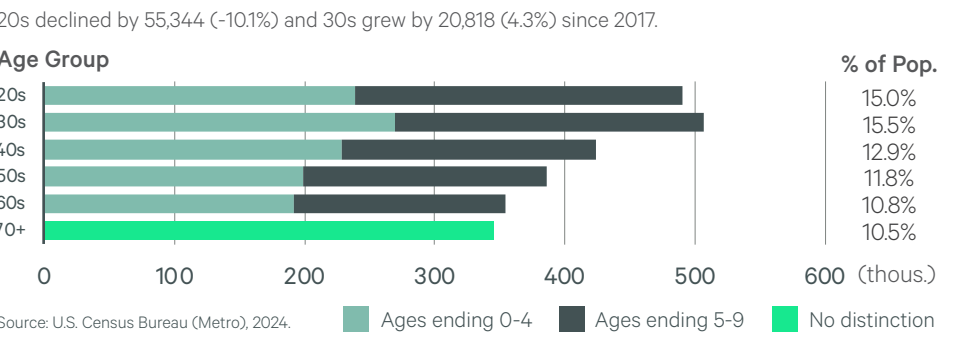
Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)



Source: U.S. Census Bureau (Metro), 2024.

18 Waterloo Region

Score
51.24

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	29,100	45.5%	\$106,621	21.0%
Software Developers & Programmers	11,800	22.9%	\$116,688	30.5%
Computer Support, Database & Systems	10,800	116.0%	\$87,277	25.9%
Computer & Information Systems Managers	3,000	3.4%	\$136,822	18.9%
Technology Engineering-Related	3,500	40.0%	\$106,246	19.4%
Total Non-Tech Occupations	37,800	11.2%	\$66,477	18.5%
Sales	5,200	-22.4%	\$75,296	8.8%
Administrative & Office Support	15,400	-8.9%	\$50,253	11.5%
Business Operations & Finance	10,700	48.6%	\$77,189	19.2%
Marketing	6,500	103.1%	\$80,288	19.4%

*2023; ** 2018-2023; Source: Statistics Canada (Metro Area), April 2024. Data in C\$.

Top 5 Industries for Tech Talent Workforce (2022)



*Includes computer software and services and computer product manufacturing;

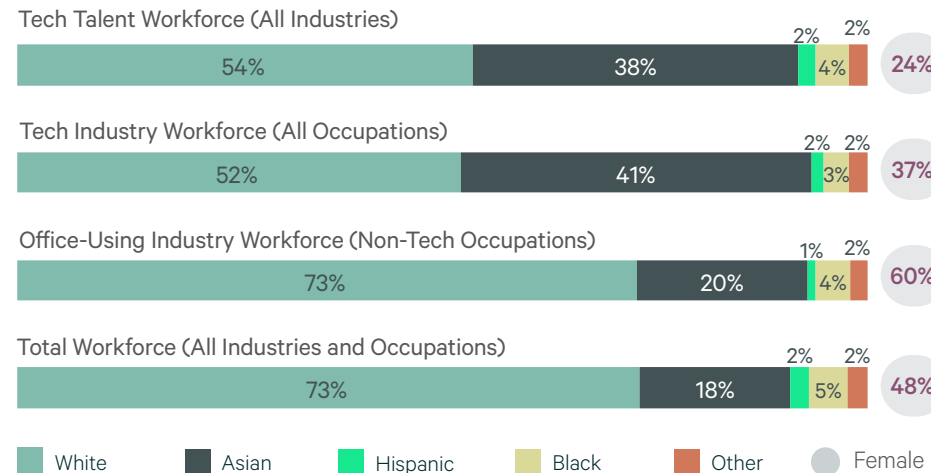
Finance, Insurance, Real Estate; *Excl high-tech. Source: Statistics Canada (Metro), April 2024 and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



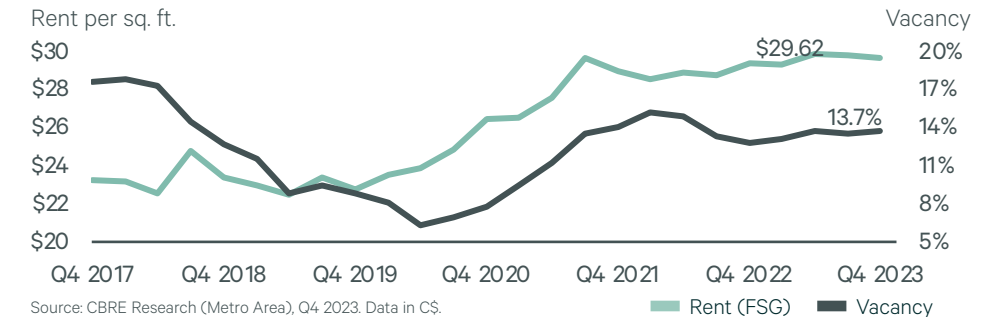
Source: Statistics Canada (Metro) and CBRE Research, April 2024.

Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,688	65%	79%	21%
Math/Statistics	905	24%	60%	40%
Other Tech Engineering	1,369	33%	77%	23%
Totals	3,962	42%	74%	26%

Source: Various Canadian Ministries of Education (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023. Data in C\$.

Annual Operating Costs (2023)



Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

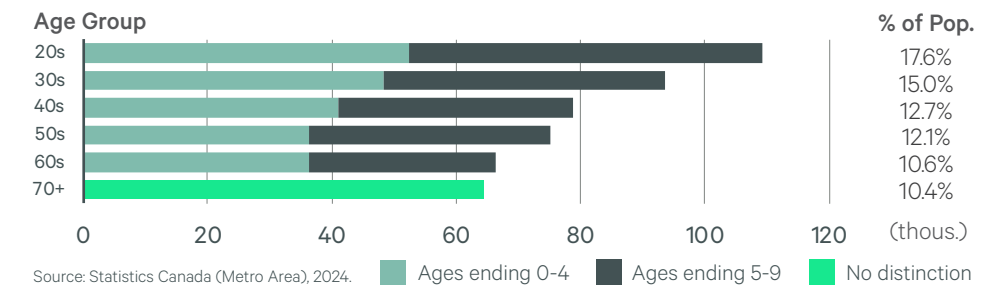
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023)
Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

Population Trends (2022)

20s grew by 24,702 (29.2%) and 30s grew by 15,735 (20.2%) since 2017.



Source: Statistics Canada (Metro Area), 2024. Legend: Ages ending 0-4, Ages ending 5-9, No distinction

19 Phoenix

Score
51.10

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	108,380	17.2%	\$112,675	31.2%
Software Developers & Programmers	42,150	67.7%	\$119,086	21.4%
Computer Support, Database & Systems	43,630	-13.9%	\$93,037	22.9%
Computer & Information Systems Managers	11,220	87.6%	\$168,850	20.5%
Technology Engineering-Related	11,380	6.2%	\$112,353	49.9%
Total Non-Tech Occupations	289,690	1.4%	\$59,422	31.7%
Sales	50,160	31.9%	\$87,218	33.5%
Administrative & Office Support	20,500	27.8%	\$46,023	24.7%
Business Operations & Finance	189,900	-7.0%	\$82,646	22.8%
Marketing	29,130	6.6%	\$87,218	39.5%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



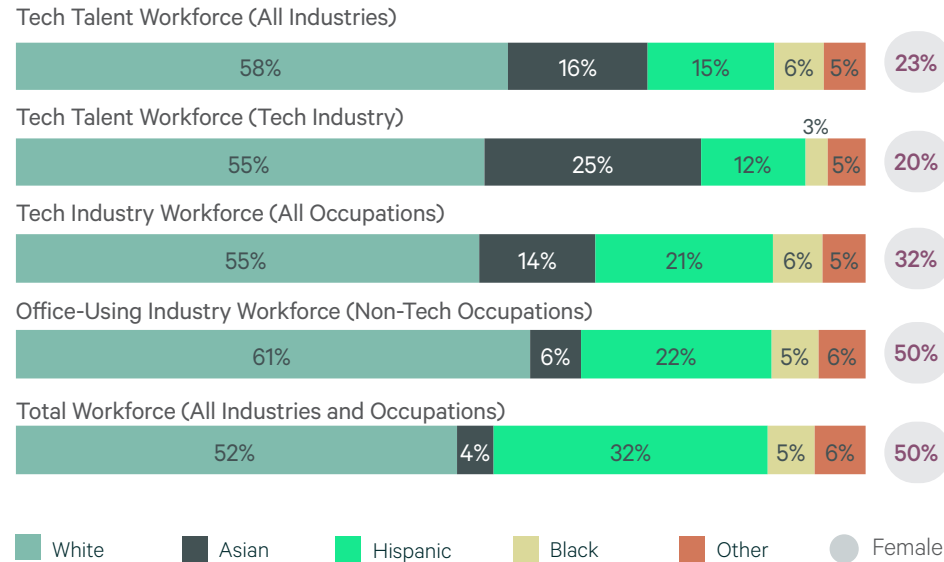
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

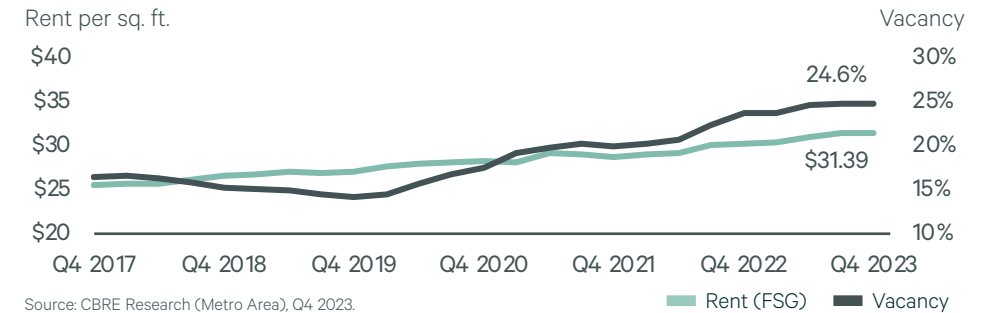
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	4,357	0%	74%	26%
Math/Statistics	306	0%	67%	33%
Other Tech Engineering	1,831	-3%	79%	21%
Totals	6,494	-1%	75%	25%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	4,357	47%	16%	16%	15%	6%
Math/Statistics	306	60%	9%	22%	4%	5%
Other Tech Engineering	1,831	61%	11%	20%	4%	5%
Totals	6,494	51%	14%	18%	11%	6%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

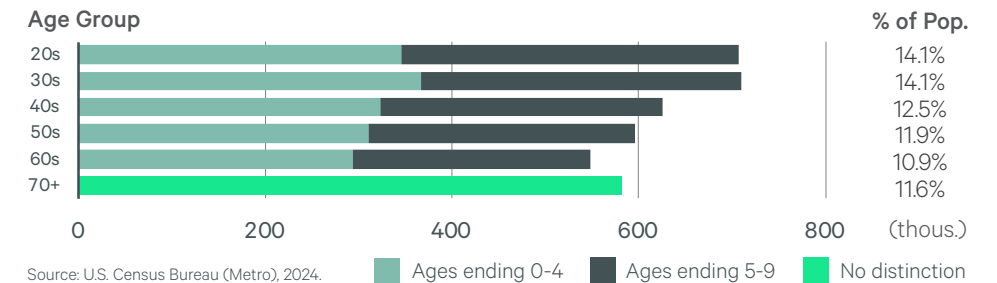
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 46,796 (7.1%) and 30s grew by 66,405 (10.3%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

20 Calgary

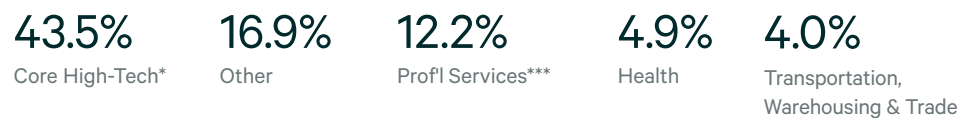
Score
49.58

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	59,500	78.1%	\$104,686	7.7%
Software Developers & Programmers	16,100	114.7%	\$105,851	-5.1%
Computer Support, Database & Systems	26,600	75.0%	\$96,886	10.3%
Computer & Information Systems Managers	6,900	130.0%	\$154,710	23.0%
Technology Engineering-Related	9,900	28.6%	\$88,816	-2.3%
Total Non-Tech Occupations	118,800	20.5%	\$73,216	5.9%
Sales	12,100	-12.3%	\$65,811	-13.2%
Administrative & Office Support	48,700	13.8%	\$58,365	10.1%
Business Operations & Finance	39,700	30.2%	\$87,027	3.5%
Marketing	18,300	59.1%	\$87,734	7.4%

*2023; ** 2018-2023; Source: Statistics Canada (Metro Area), April 2024. Data in C\$.

Top 5 Industries for Tech Talent Workforce (2022)



*Includes computer software and services and computer product manufacturing;

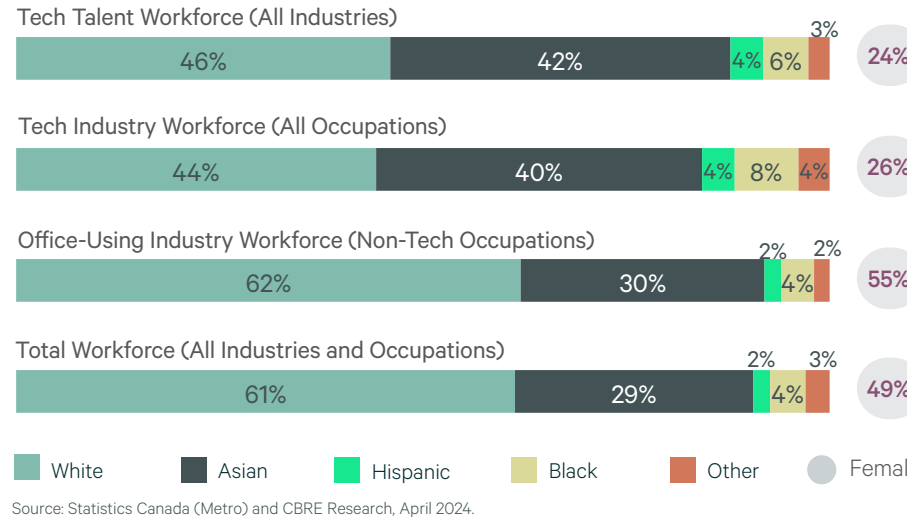
Finance, Insurance, Real Estate; *Excl high-tech. Source: Statistics Canada (Metro), April 2024 and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)

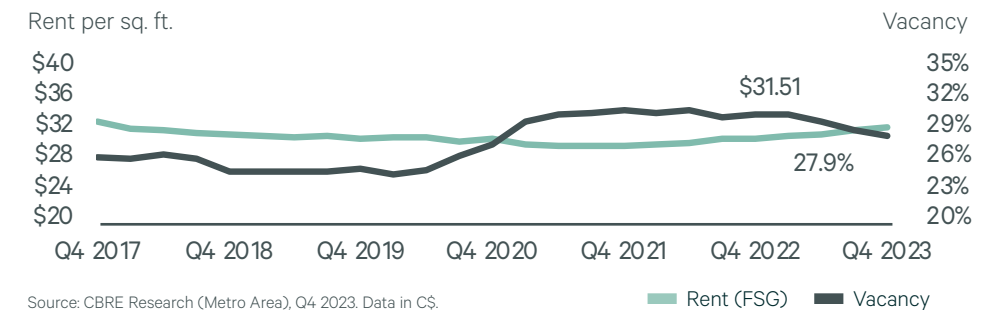


Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	366	38%	82%	18%
Math/Statistics	182	136%	63%	37%
Other Tech Engineering	527	24%	83%	17%
Totals	1,075	40%	79%	21%

Source: Various Canadian Ministries of Education (Region), 2024.

Office Rent & Vacancy Trends



Annual Operating Costs (2023)



Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

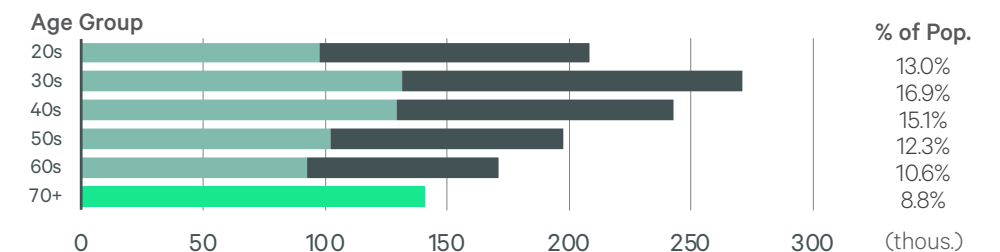
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023)
Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

Population Trends (2022)

20s grew by 1,802 (0.9%) and 30s grew by 23,358 (7.5%) since 2017.



Source: Statistics Canada (Metro Area), 2024. Legend: Ages ending 0-4, Ages ending 5-9, No distinction

21 Baltimore

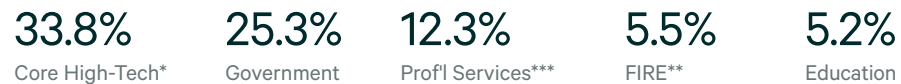
Score
48.97

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	75,200	-6.1%	\$130,467	26.2%
Software Developers & Programmers	24,450	19.7%	\$137,049	26.3%
Computer Support, Database & Systems	38,770	-12.4%	\$121,843	25.3%
Computer & Information Systems Managers	6,030	17.5%	\$170,970	11.2%
Technology Engineering-Related	5,950	-42.2%	\$123,904	31.4%
Total Non-Tech Occupations	142,070	-14.3%	\$59,802	15.0%
Sales	27,140	-7.7%	\$79,790	-0.6%
Administrative & Office Support	9,290	5.3%	\$45,917	18.3%
Business Operations & Finance	91,130	-16.1%	\$88,900	12.5%
Marketing	14,510	-23.3%	\$79,790	25.2%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



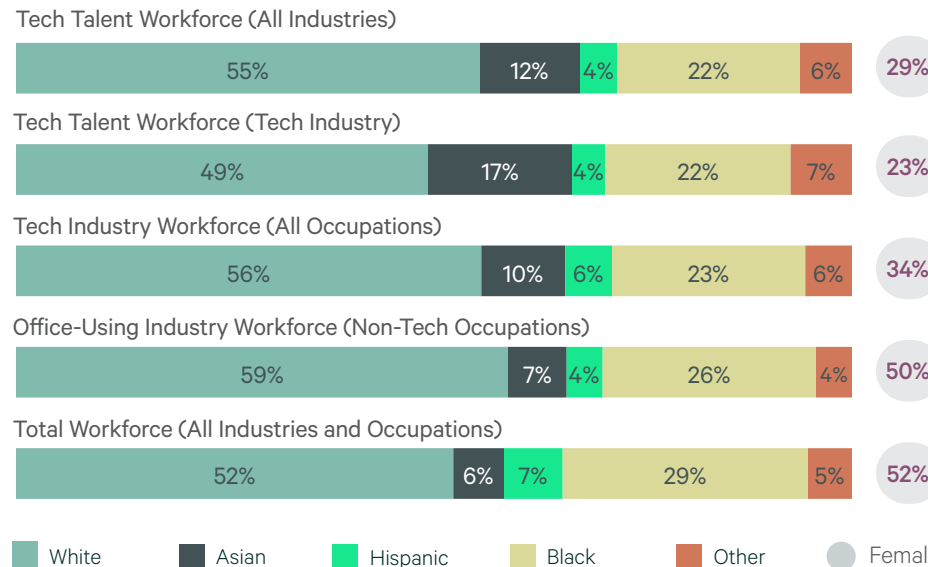
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

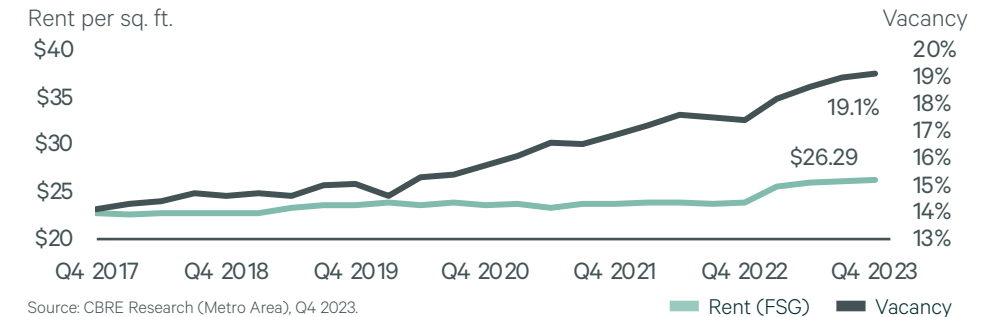
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	2,451	-6%	73%	27%
Math/Statistics	682	19%	66%	34%
Other Tech Engineering	1,240	-8%	76%	24%
Totals	4,373	-4%	73%	27%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	2,451	43%	24%	6%	22%	5%
Math/Statistics	682	55%	24%	7%	6%	8%
Other Tech Engineering	1,240	58%	12%	9%	14%	5%
Totals	4,373	49%	20%	7%	17%	6%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

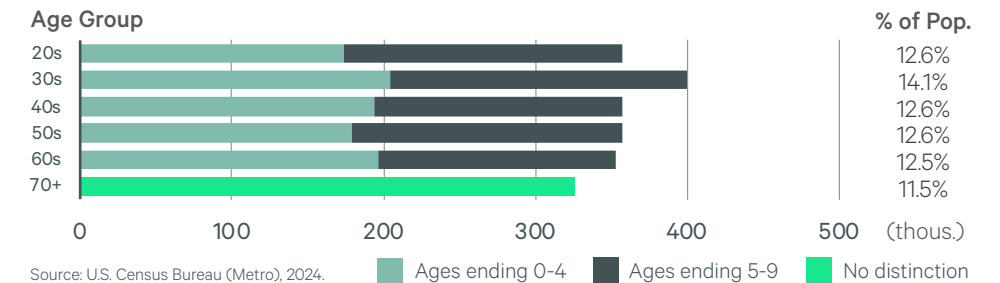
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 30,356 (-7.8%) and 30s grew by 16,189 (4.2%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

22 Detroit

Score
48.07

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	97,720	-3.0%	\$104,539	23.9%
Software Developers & Programmers	39,540	9.5%	\$104,737	14.2%
Computer Support, Database & Systems	35,480	-18.8%	\$90,503	22.7%
Computer & Information Systems Managers	9,290	43.6%	\$165,005	19.0%
Technology Engineering-Related	13,410	-7.1%	\$101,010	36.6%
Total Non-Tech Occupations	229,790	-7.8%	\$63,446	30.9%
Sales	45,810	22.0%	\$107,382	47.1%
Administrative & Office Support	18,060	0.4%	\$44,689	20.6%
Business Operations & Finance	143,970	-15.0%	\$84,019	12.6%
Marketing	21,950	-10.0%	\$107,382	57.6%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



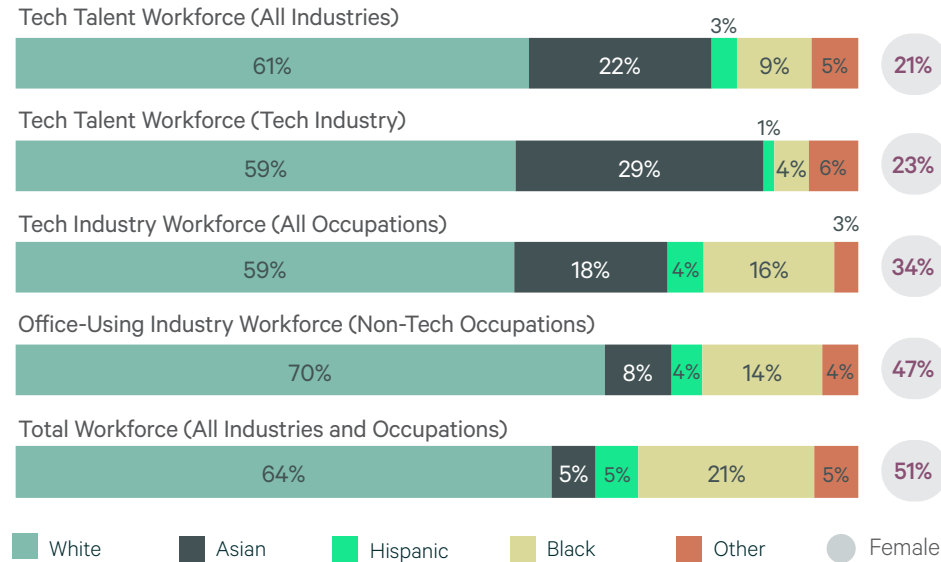
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

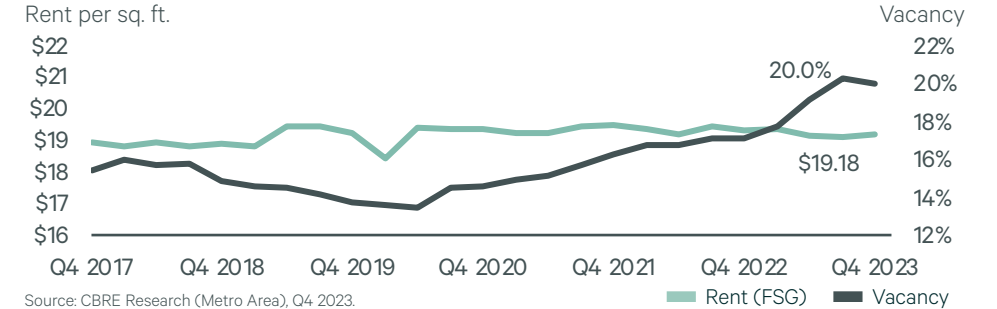
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	3,157	3%	70%	30%
Math/Statistics	571	1%	58%	42%
Other Tech Engineering	2,909	-8%	79%	21%
Totals	6,637	-2%	73%	27%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	3,157	57%	27%	6%	5%	5%
Math/Statistics	571	65%	19%	5%	5%	5%
Other Tech Engineering	2,909	70%	15%	7%	4%	4%
Totals	6,637	63%	21%	6%	5%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

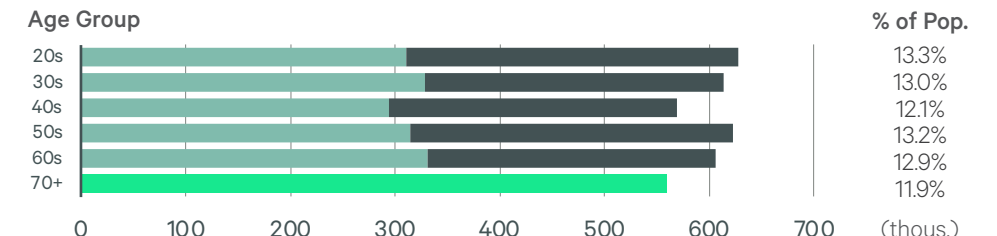
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 22,003 (-3.4%) and 30s grew by 43,795 (7.7%) since 2017.



Source: U.S. Census Bureau (Metro), 2024. Legend: Ages ending 0-4, Ages ending 5-9, No distinction

23 Chicago

Score
46.65

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	160,790	-9.5%	\$113,274	33.2%
Software Developers & Programmers	65,790	17.1%	\$112,347	14.6%
Computer Support, Database & Systems	65,080	-27.6%	\$97,516	43.3%
Computer & Information Systems Managers	21,370	39.5%	\$168,290	15.2%
Technology Engineering-Related	8,550	-47.0%	\$107,399	40.4%
Total Non-Tech Occupations	507,890	-10.5%	\$62,178	23.2%
Sales	95,190	5.4%	\$81,573	16.6%
Administrative & Office Support	43,580	1.8%	\$47,477	21.4%
Business Operations & Finance	309,630	-16.5%	\$88,995	14.4%
Marketing	59,490	-6.1%	\$81,573	31.3%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

30.2%	17.7%	10.8%	9.3%	5.3%
Core High-Tech*	FIRE**	Prof'l Services***	Manufacturing***	Transportation, Warehousing & Trade

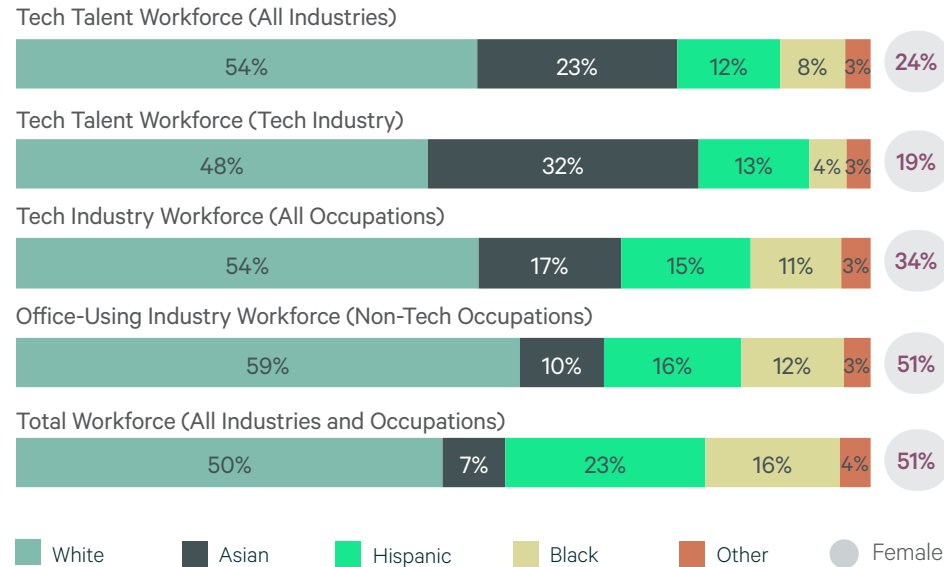
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

39.2% Chicago vs 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

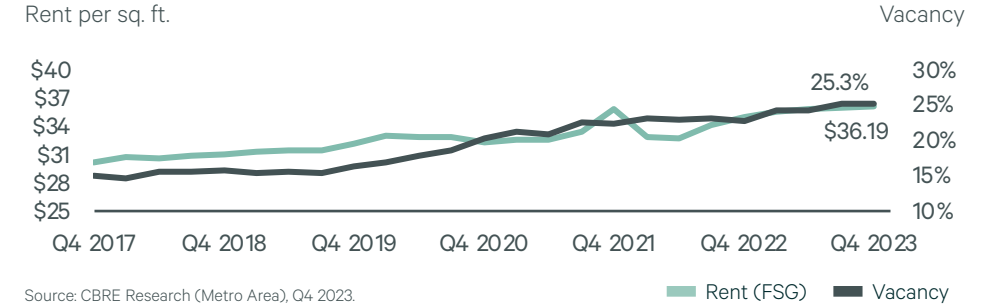
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	4,832	-6%	72%	28%
Math/Statistics	1,665	-4%	61%	39%
Other Tech Engineering	1,730	-12%	74%	26%
Totals	8,227	-7%	70%	30%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	4,832	46%	25%	17%	9%	3%
Math/Statistics	1,665	57%	22%	14%	3%	3%
Other Tech Engineering	1,730	54%	17%	20%	5%	5%
Totals	8,227	49%	23%	17%	7%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#15 Rank | \$53M Talent + \$2M Office Rent = \$55M Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

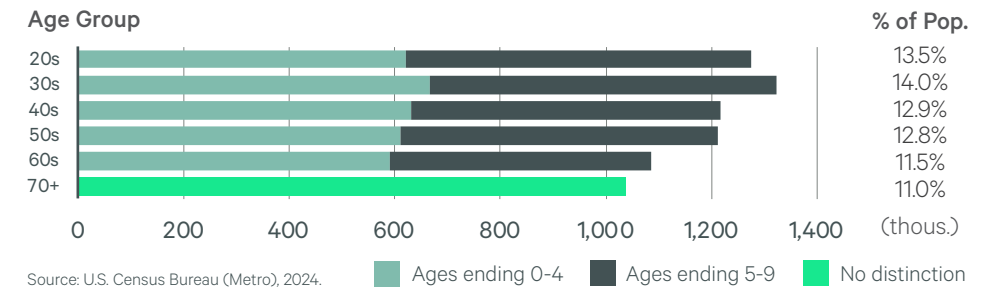
Average Apartment Rent (2023)

\$1,966 Per unit/month | 18.9% 5-year growth | 20.8% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 49,150 (-3.7%) and 30s declined by 9,393 (-0.7%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

24 Philadelphia

Score
45.54

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	105,930	-8.5%	\$114,320	20.0%
Software Developers & Programmers	40,440	13.4%	\$115,008	14.8%
Computer Support, Database & Systems	47,380	-22.1%	\$99,074	16.3%
Computer & Information Systems Managers	11,090	35.2%	\$183,970	14.7%
Technology Engineering-Related	7,020	-37.0%	\$107,170	23.3%
Total Non-Tech Occupations	320,330	-15.4%	\$61,564	19.0%
Sales	66,540	7.2%	\$88,236	17.3%
Administrative & Office Support	23,120	-11.0%	\$46,602	18.6%
Business Operations & Finance	206,010	-19.4%	\$88,733	8.4%
Marketing	24,660	-29.3%	\$88,236	24.2%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



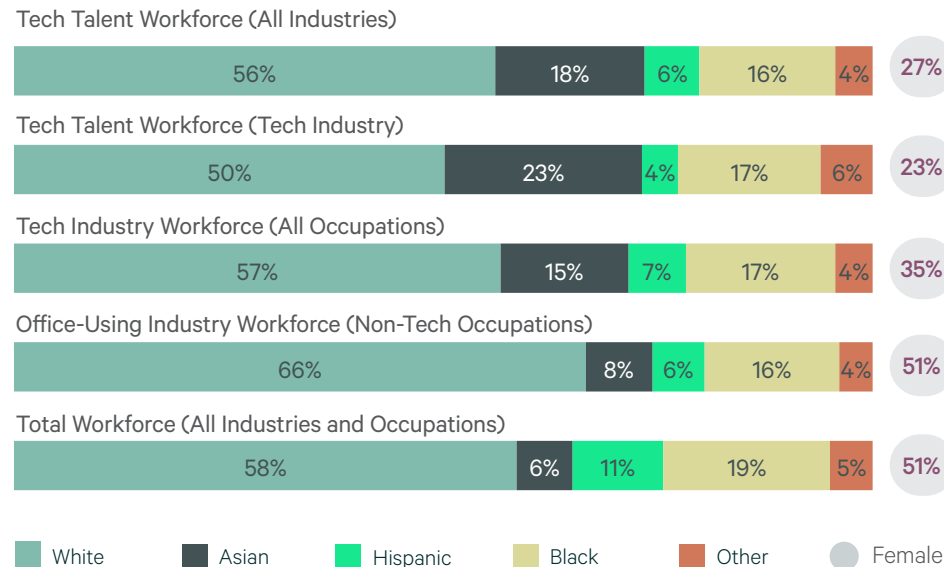
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

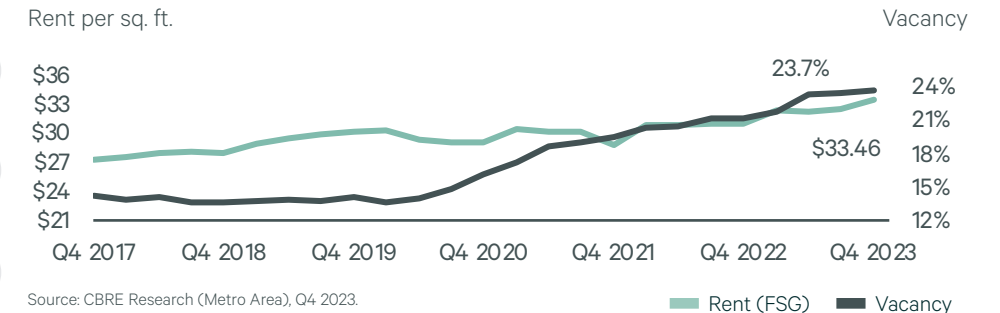
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	4,121	10%	71%	29%
Math/Statistics	848	4%	57%	43%
Other Tech Engineering	1,673	4%	78%	22%
Totals	6,642	8%	71%	29%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	4,121	53%	26%	8%	10%	4%
Math/Statistics	848	67%	19%	6%	5%	4%
Other Tech Engineering	1,673	68%	16%	6%	5%	4%
Totals	6,642	58%	23%	7%	8%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

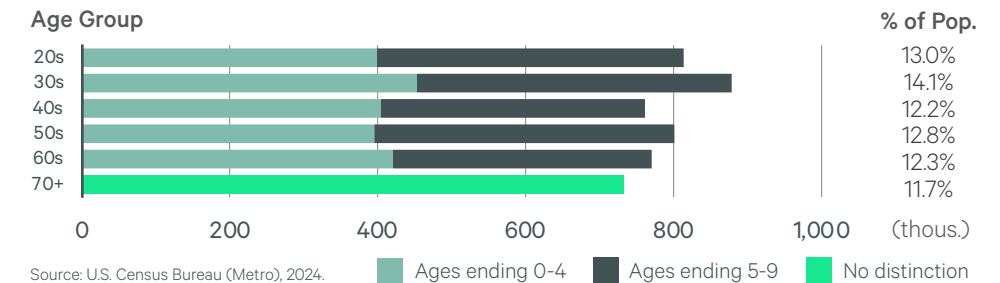
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023) Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 33,707 (-4.0%) and 30s grew by 69,649 (8.6%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

25 Minneapolis-St. Paul

Score
45.24

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	94,020	-5.1%	\$112,635	21.6%
Software Developers & Programmers	43,550	47.8%	\$114,317	17.0%
Computer Support, Database & Systems	35,550	-32.6%	\$97,056	16.4%
Computer & Information Systems Managers	8,700	7.3%	\$178,530	20.2%
Technology Engineering-Related	6,220	-29.2%	\$101,954	27.6%
Total Non-Tech Occupations	237,960	1.0%	\$65,132	23.5%
Sales	47,340	16.5%	\$87,887	21.7%
Administrative & Office Support	26,760	21.7%	\$49,615	21.3%
Business Operations & Finance	142,300	-4.0%	\$88,549	18.4%
Marketing	21,560	-12.8%	\$87,887	26.1%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



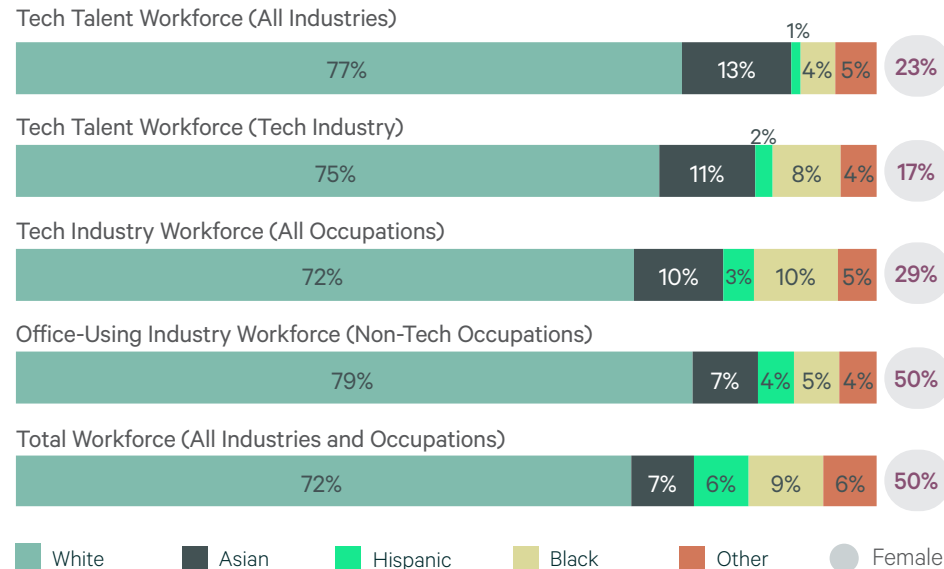
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

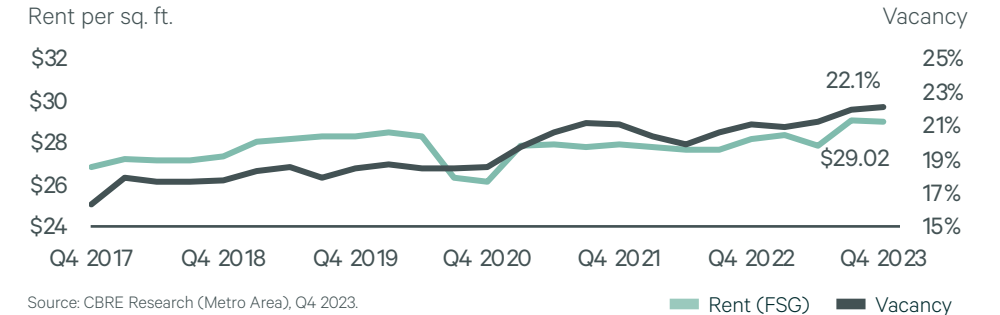
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	2,237	-6%	73%	27%
Math/Statistics	549	-6%	64%	36%
Other Tech Engineering	917	-6%	76%	24%
Totals	3,703	-6%	73%	27%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	2,237	56%	19%	6%	14%	4%
Math/Statistics	549	76%	13%	6%	2%	3%
Other Tech Engineering	917	76%	10%	4%	5%	5%
Totals	3,703	64%	16%	5%	10%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

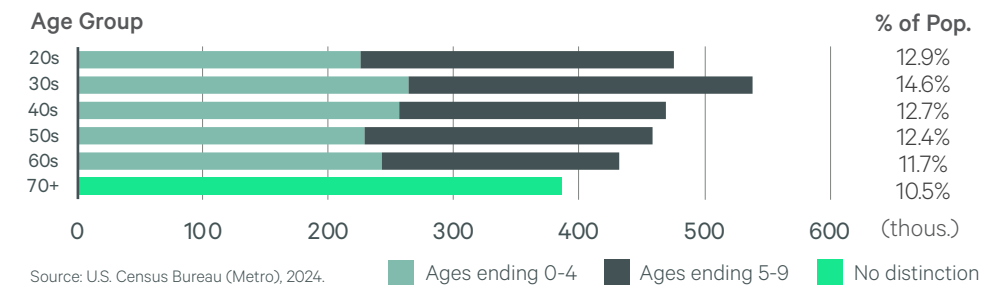
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023) Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 2,175 (-0.5%) and 30s grew by 10,246 (1.9%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

26 Charlotte

Score
44.81

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	71,050	19.3%	\$119,455	28.5%
Software Developers & Programmers	28,800	78.5%	\$124,696	21.1%
Computer Support, Database & Systems	30,760	-6.5%	\$106,189	26.2%
Computer & Information Systems Managers	7,450	36.9%	\$175,780	23.6%
Technology Engineering-Related	4,040	-20.2%	\$95,799	46.2%
Total Non-Tech Occupations	151,440	-0.1%	\$63,444	28.6%
Sales	35,340	36.4%	\$88,947	29.8%
Administrative & Office Support	13,350	43.7%	\$43,223	18.2%
Business Operations & Finance	86,390	-12.7%	\$91,435	14.8%
Marketing	16,360	-6.6%	\$88,947	37.3%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



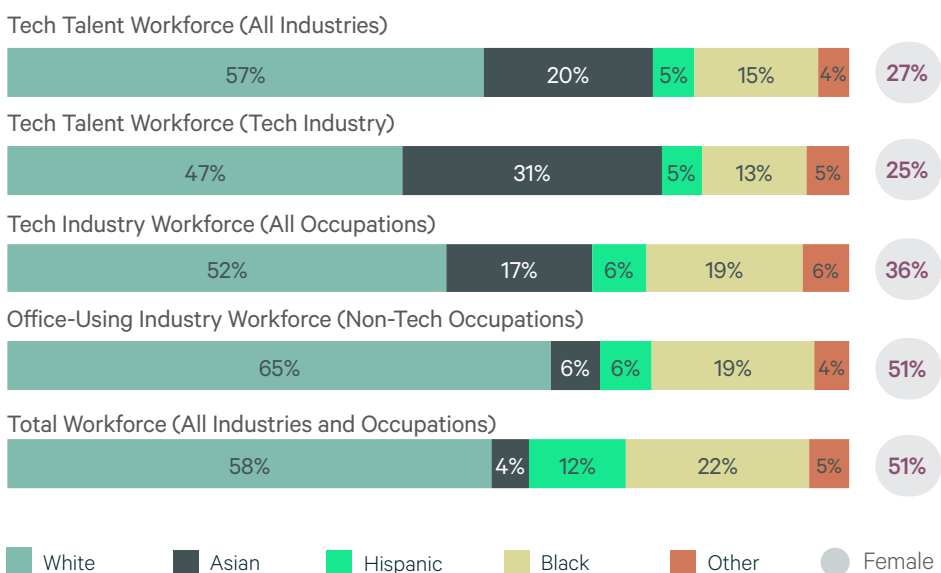
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

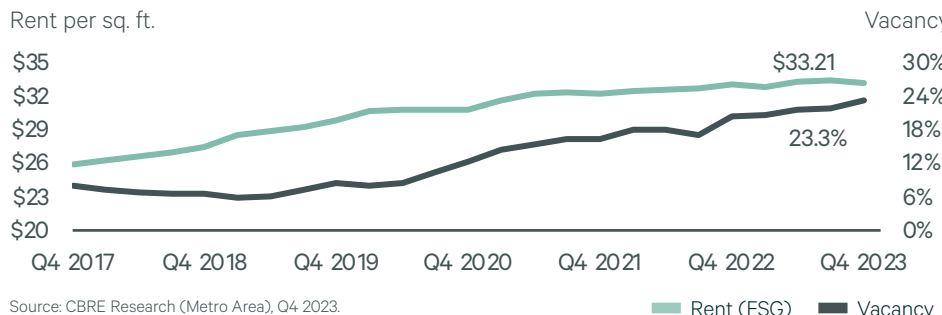
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,133	-9%	78%	22%
Math/Statistics	200	-1%	62%	39%
Other Tech Engineering	381	-15%	88%	12%
Totals	1,714	-10%	78%	22%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,133	51%	18%	12%	15%	5%
Math/Statistics	200	65%	9%	8%	14%	4%
Other Tech Engineering	381	76%	8%	8%	4%	5%
Totals	1,714	59%	14%	10%	12%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



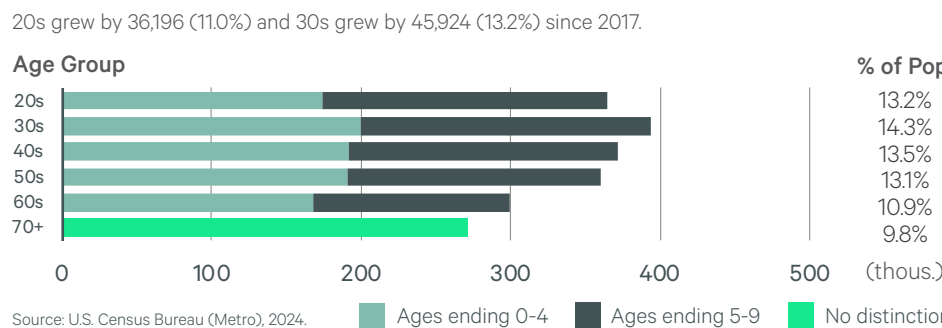
Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)



Source: U.S. Census Bureau (Metro), 2024.

27 South Florida

Score
44.02

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	80,650	13.9%	\$101,746	33.5%
Software Developers & Programmers	29,510	45.2%	\$110,802	24.6%
Computer Support, Database & Systems	39,040	1.4%	\$86,101	30.5%
Computer & Information Systems Managers	7,490	48.9%	\$156,700	27.9%
Technology Engineering-Related	4,610	-33.5%	\$96,871	55.0%
Total Non-Tech Occupations	378,170	-2.8%	\$55,376	30.3%
Sales	65,130	29.8%	\$78,253	25.2%
Administrative & Office Support	28,870	37.0%	\$42,357	23.6%
Business Operations & Finance	241,750	-13.2%	\$78,656	17.4%
Marketing	42,420	7.4%	\$78,253	40.8%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

34.4%	13.7%	9.2%	6.6%	5.9%
Core High-Tech*	FIRE**	Prof'l Services***	Health	Government

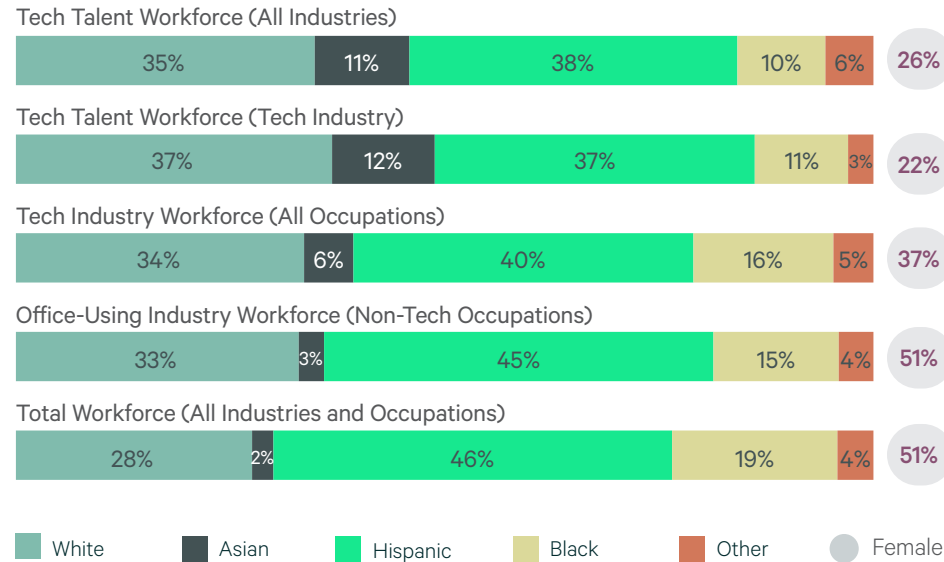
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

45.6% South Florida vs 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

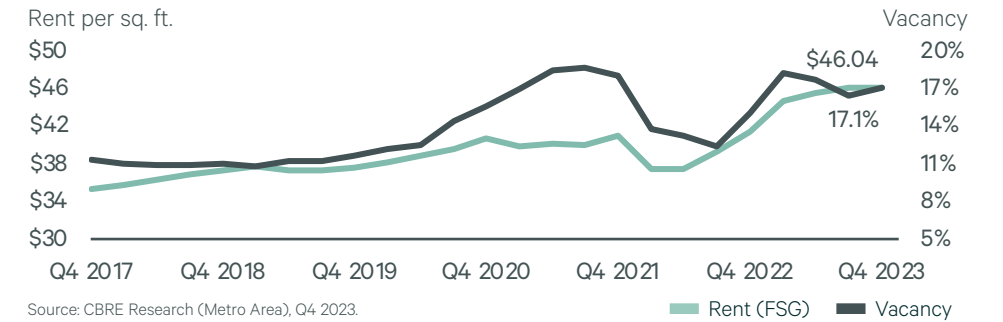
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	2,191	0%	77%	23%
Math/Statistics	298	32%	64%	36%
Other Tech Engineering	814	-6%	82%	18%
Totals	3,303	1%	77%	23%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	2,191	20%	8%	54%	15%	3%
Math/Statistics	298	41%	5%	44%	6%	3%
Other Tech Engineering	814	27%	6%	54%	9%	4%
Totals	3,303	22%	7%	54%	13%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#26 Rank | \$49M Talent + \$2M Office Rent = \$51.2M Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

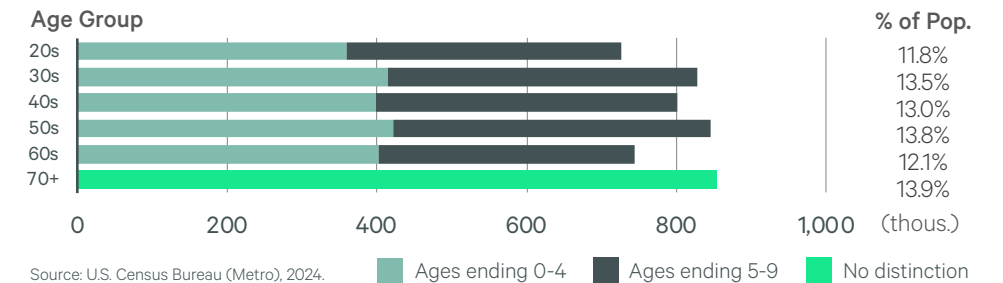
Average Apartment Rent (2023)

\$2,485 Per unit/month | 36.3% 5-year growth | 29.3% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 58,488 (-7.4%) and 30s grew by 11,172 (1.4%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

28 Portland

Score
43.62

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	70,220	9.4%	\$119,306	33.7%
Software Developers & Programmers	27,350	36.7%	\$121,410	21.8%
Computer Support, Database & Systems	20,690	-15.2%	\$99,432	26.1%
Computer & Information Systems Managers	5,480	19.9%	\$171,190	27.2%
Technology Engineering-Related	16,700	9.8%	\$126,008	60.8%
Total Non-Tech Occupations	132,530	-0.9%	\$63,509	26.1%
Sales	24,300	20.2%	\$88,697	21.3%
Administrative & Office Support	16,040	36.4%	\$48,661	21.6%
Business Operations & Finance	81,120	-10.4%	\$84,972	16.6%
Marketing	11,070	-1.9%	\$88,697	27.3%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

45.6% Core High-Tech* 9.5% Prof'l Services*** 7.5% FIRE** 6.6% Manufacturing*** 5.8% Health

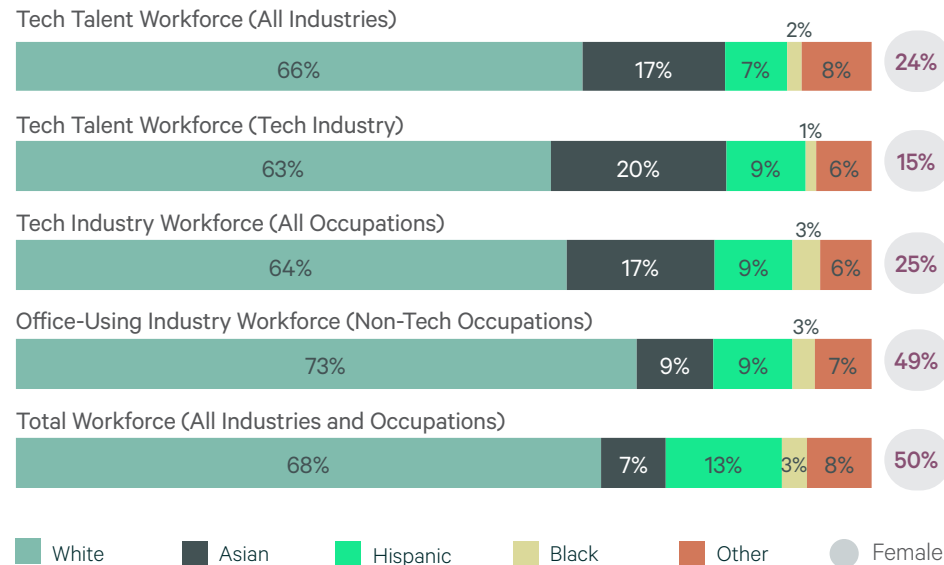
*Includes computer software and services and computer product manufacturing.
Finance, Insurance, Real Estate; *Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

60.9% Portland 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

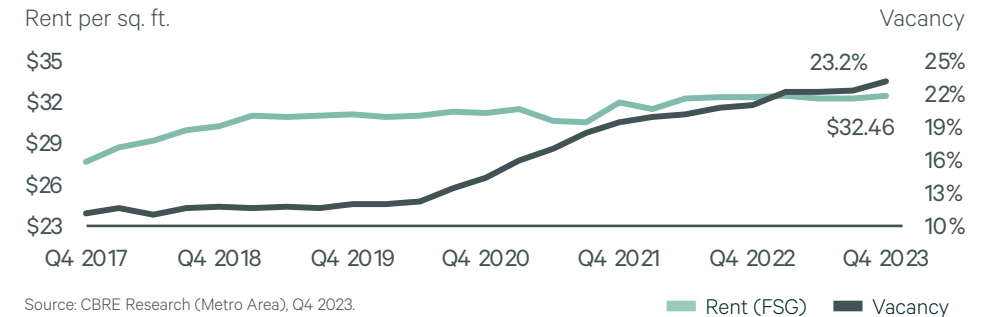
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	449	-3%	79%	21%
Math/Statistics	249	1%	61%	39%
Other Tech Engineering	351	-10%	78%	22%
Totals	1,049	-5%	75%	25%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	449	64%	14%	10%	3%	9%
Math/Statistics	249	68%	15%	8%	2%	8%
Other Tech Engineering	351	63%	17%	12%	2%	6%
Totals	1,049	64%	15%	10%	3%	8%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Annual Operating Costs (2023)

#17 Rank \$52M Talent + \$2M Office Rent = \$54.4M Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

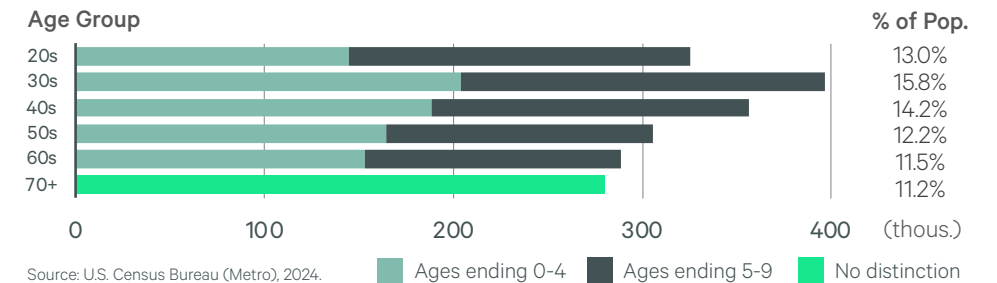
Average Apartment Rent (2023)

\$1,712 Per unit/month 20.0% 5-year growth 17.2% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023)
Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 4,107 (-1.2%) and 30s grew by 18,715 (5.0%) since 2017.



29 Madison

Score
42.86

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	23,950	-1.2%	\$96,670	16.1%
Software Developers & Programmers	10,240	6.4%	\$99,886	18.6%
Computer Support, Database & Systems	10,540	-12.6%	\$84,762	7.0%
Computer & Information Systems Managers	1,740	30.8%	\$155,220	23.1%
Technology Engineering-Related	1,430	17.2%	\$92,597	35.2%
Total Non-Tech Occupations	50,080	-4.8%	\$59,250	26.0%
Sales	10,430	14.1%	\$80,303	25.1%
Administrative & Office Support	4,420	-12.8%	\$45,262	19.1%
Business Operations & Finance	30,240	-13.4%	\$80,813	21.1%
Marketing	4,990	44.6%	\$80,303	29.7%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

56.6%	11.0%	6.9%	5.9%	5.1%
Core High-Tech*	FIRE**	Government	Prof'l Services***	Information***

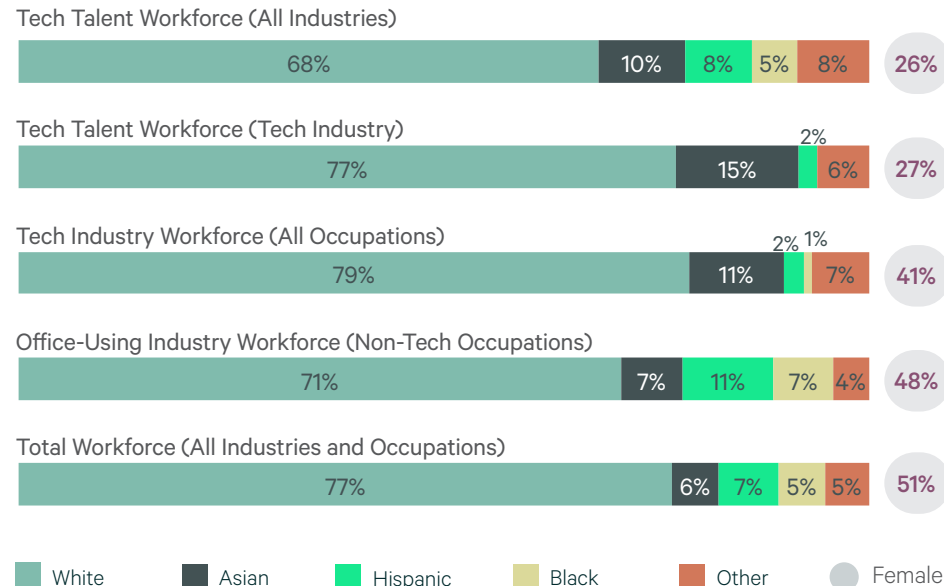
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

65.5% Madison vs 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

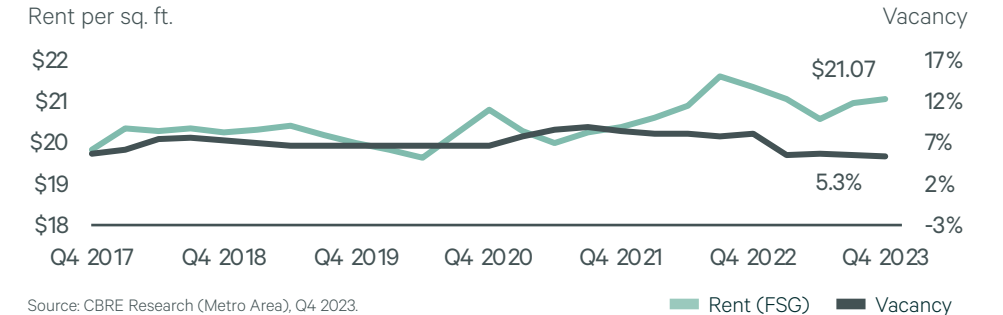
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,055	3%	83%	17%
Math/Statistics	494	-13%	67%	33%
Other Tech Engineering	838	1%	77%	23%
Totals	2,387	-1%	78%	22%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,055	68%	22%	3%	2%	6%
Math/Statistics	494	74%	18%	3%	2%	3%
Other Tech Engineering	838	84%	6%	5%	1%	4%
Totals	2,387	75%	15%	4%	2%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#38 Rank | \$47M Talent + \$1M Office Rent = \$47.9M Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

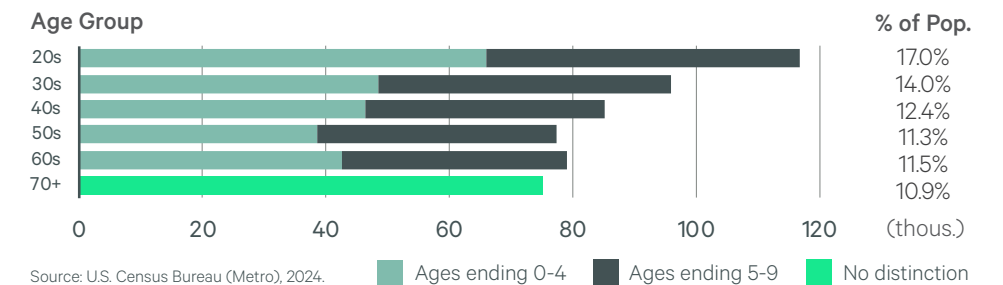
Average Apartment Rent (2023)

\$1,463 Per unit/month | 23.9% 5-year growth | 18.2% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 4,836 (4.3%) and 30s grew by 1,055 (1.1%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

30 Tampa

Score
42.41

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	59,650	14.9%	\$105,181	25.3%
Software Developers & Programmers	23,020	49.6%	\$109,614	15.1%
Computer Support, Database & Systems	27,830	-3.1%	\$94,351	26.7%
Computer & Information Systems Managers	4,800	39.9%	\$163,950	17.4%
Technology Engineering-Related	4,000	-8.3%	\$91,116	44.6%
Total Non-Tech Occupations	188,450	-6.0%	\$55,846	28.9%
Sales	34,820	28.2%	\$77,972	22.6%
Administrative & Office Support	13,310	24.9%	\$42,974	23.8%
Business Operations & Finance	119,500	-16.5%	\$78,337	17.2%
Marketing	20,820	6.9%	\$77,972	25.0%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

33.6% Core High-Tech*
15.9% FIRE**
11.0% Prof'l Services***
5.5% Health
5.3% Education

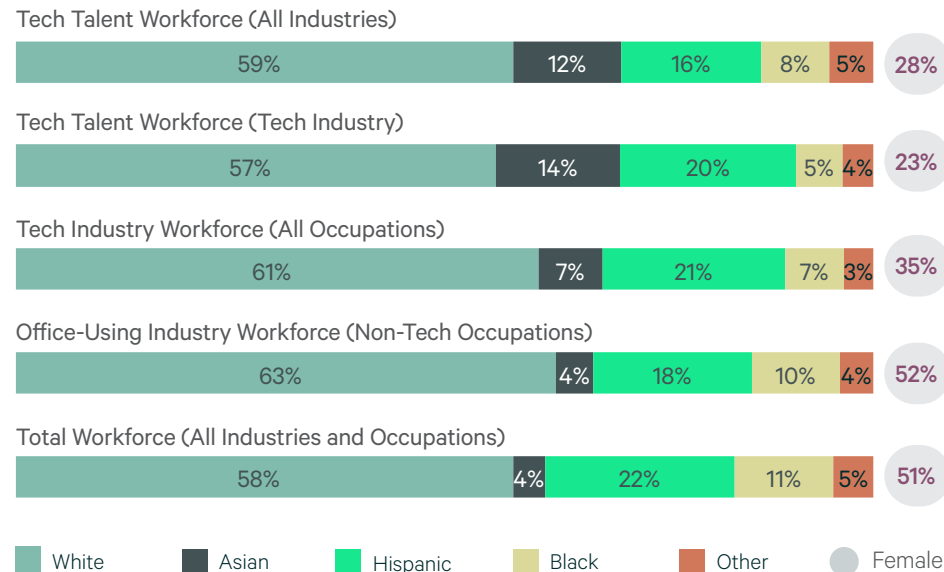
*Includes computer software and services and computer product manufacturing;
 Finance, Insurance, Real Estate; *Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

41.1% Tampa
52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

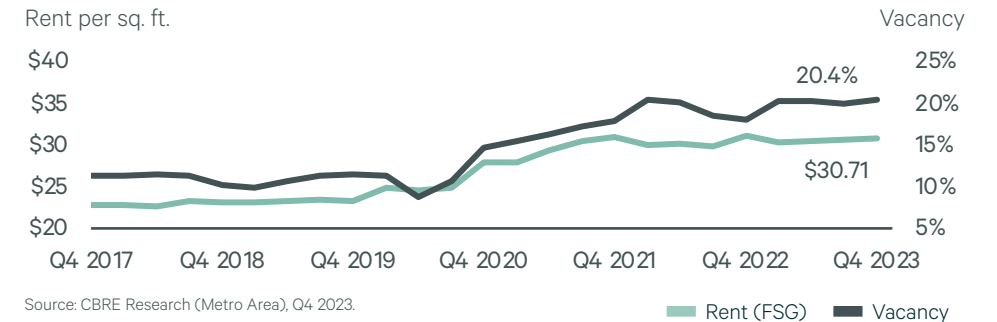
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,219	5%	75%	25%
Math/Statistics	123	-1%	63%	37%
Other Tech Engineering	521	1%	80%	20%
Totals	1,863	4%	76%	24%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,219	52%	10%	21%	13%	4%
Math/Statistics	123	66%	6%	20%	5%	5%
Other Tech Engineering	521	58%	8%	23%	5%	5%
Totals	1,863	54%	10%	22%	10%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#25 Rank | **\$48M** Talent + **\$3M** Office Rent = **\$51.2M** Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

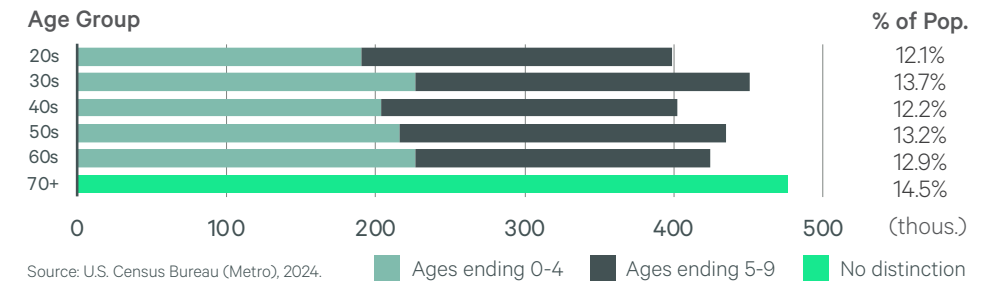
Average Apartment Rent (2023)

\$1,817 Per unit/month | **40.3%** 5-year growth | **20.7%** Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 839 (0.2%) and 30s grew by 51,275 (13.5%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

31 Houston

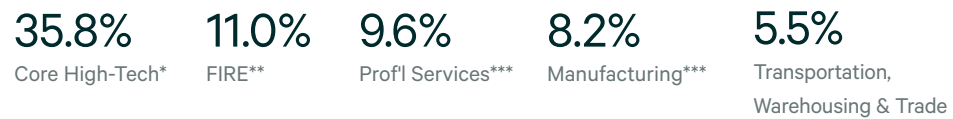
Score
40.40

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	113,850	7.3%	\$107,909	18.2%
Software Developers & Programmers	38,670	44.2%	\$107,275	3.1%
Computer Support, Database & Systems	51,960	-4.7%	\$97,549	9.5%
Computer & Information Systems Managers	11,760	91.8%	\$172,160	7.6%
Technology Engineering-Related	11,460	-38.7%	\$101,048	78.0%
Total Non-Tech Occupations	333,400	-10.7%	\$56,968	11.6%
Sales	62,190	-2.1%	\$82,686	11.9%
Administrative & Office Support	18,350	12.4%	\$41,970	11.0%
Business Operations & Finance	217,320	-13.4%	\$87,090	4.3%
Marketing	35,540	-16.3%	\$82,686	18.9%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



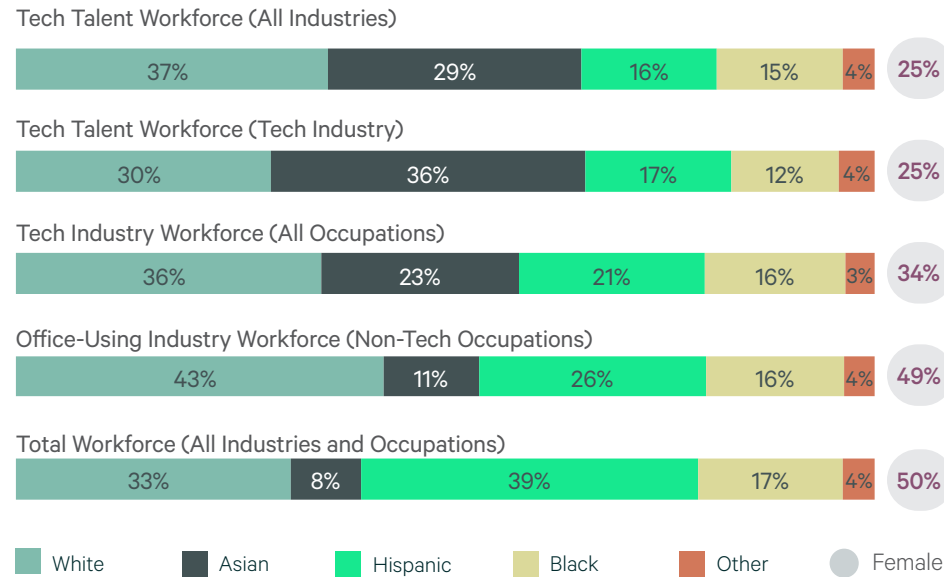
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

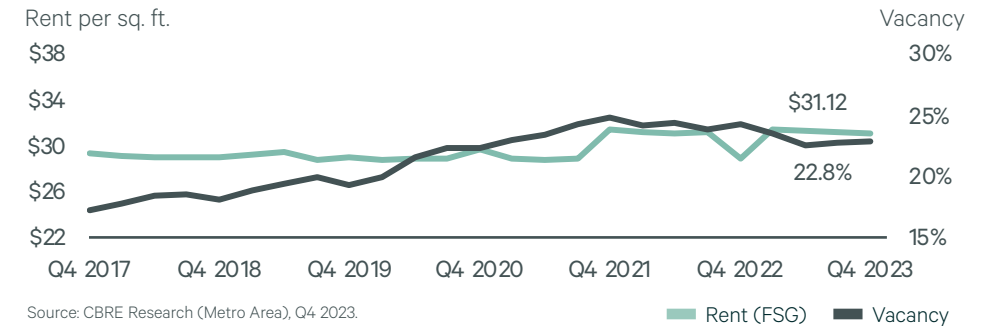
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,493	-5%	75%	25%
Math/Statistics	447	-6%	60%	40%
Other Tech Engineering	831	-8%	77%	23%
Totals	2,771	-6%	73%	27%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,493	26%	30%	27%	15%	3%
Math/Statistics	447	32%	29%	28%	10%	2%
Other Tech Engineering	831	31%	20%	27%	19%	3%
Totals	2,771	28%	27%	27%	15%	3%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

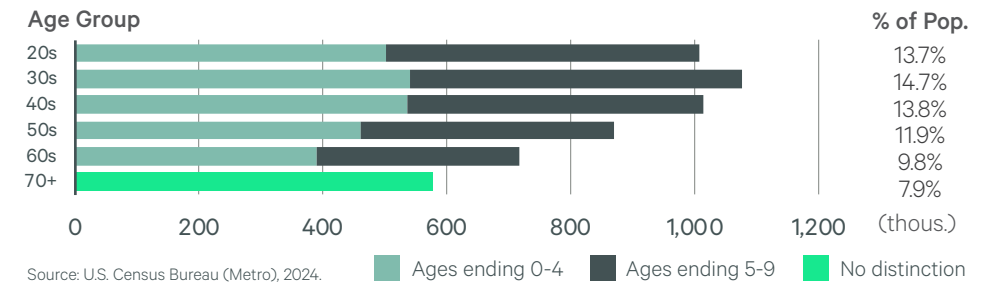
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 40,987 (4.2%) and 30s grew by 55,692 (5.5%) since 2017.



32 Orlando

Score
40.29

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	49,570	12.9%	\$97,891	17.9%
Software Developers & Programmers	19,150	34.5%	\$93,519	-1.5%
Computer Support, Database & Systems	21,400	-2.0%	\$89,550	24.7%
Computer & Information Systems Managers	4,090	33.2%	\$165,590	26.0%
Technology Engineering-Related	4,930	3.6%	\$102,762	52.7%
Total Non-Tech Occupations	167,640	1.1%	\$54,141	25.3%
Sales	29,870	33.0%	\$73,204	24.5%
Administrative & Office Support	13,760	10.4%	\$42,089	26.2%
Business Operations & Finance	104,940	-4.9%	\$75,529	12.9%
Marketing	19,070	-6.8%	\$73,204	17.8%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



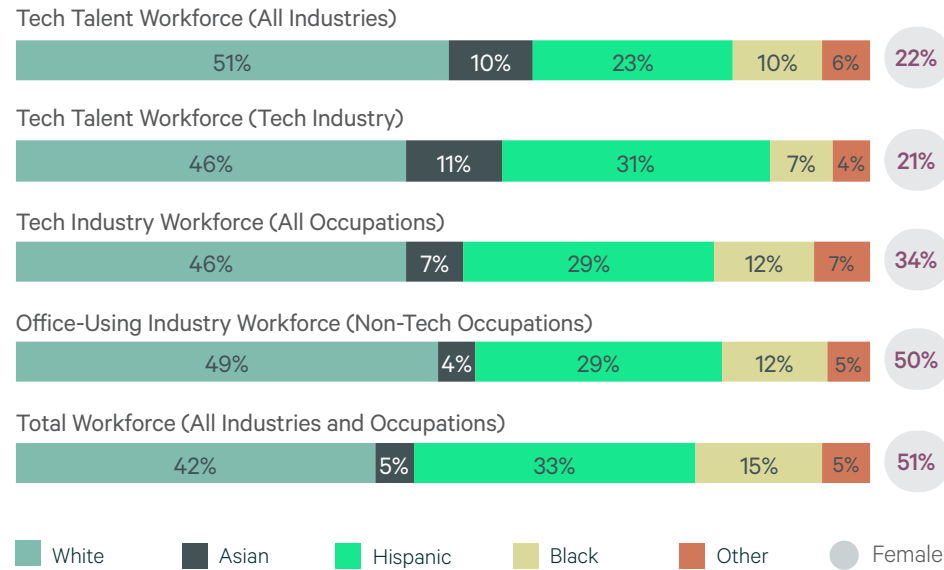
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

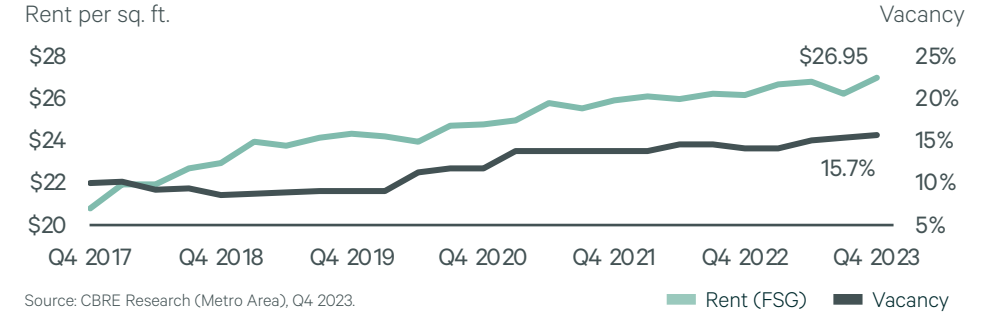
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,503	7%	82%	18%
Math/Statistics	125	-21%	63%	37%
Other Tech Engineering	1,977	20%	83%	17%
Totals	3,605	12%	82%	18%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,503	47%	12%	27%	10%	4%
Math/Statistics	125	56%	10%	21%	10%	3%
Other Tech Engineering	1,977	56%	8%	25%	6%	5%
Totals	3,605	52%	10%	26%	8%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

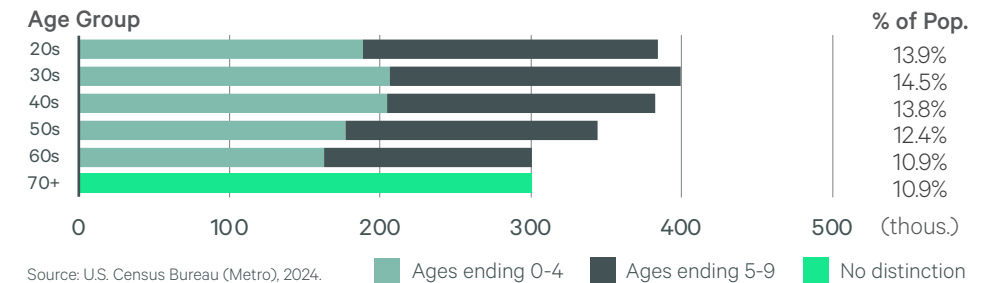
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 11,265 (3.2%) and 30s grew by 48,447 (13.8%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

33 Kansas City

Score
39.76

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	52,420	-6.3%	\$101,780	26.2%
Software Developers & Programmers	18,570	10.0%	\$103,432	21.9%
Computer Support, Database & Systems	24,930	-14.8%	\$93,831	27.4%
Computer & Information Systems Managers	4,050	19.8%	\$158,590	25.5%
Technology Engineering-Related	4,870	-24.1%	\$95,107	22.9%
Total Non-Tech Occupations	123,380	-10.4%	\$58,901	25.9%
Sales	24,660	11.4%	\$87,400	24.0%
Administrative & Office Support	10,890	11.3%	\$43,809	20.3%
Business Operations & Finance	76,430	-17.4%	\$79,918	15.8%
Marketing	11,400	-13.3%	\$87,400	38.9%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

37.5%	12.7%	9.8%	6.4%	6.4%
Core High-Tech*	FIRE**	Prof'l Services***	Information***	Government

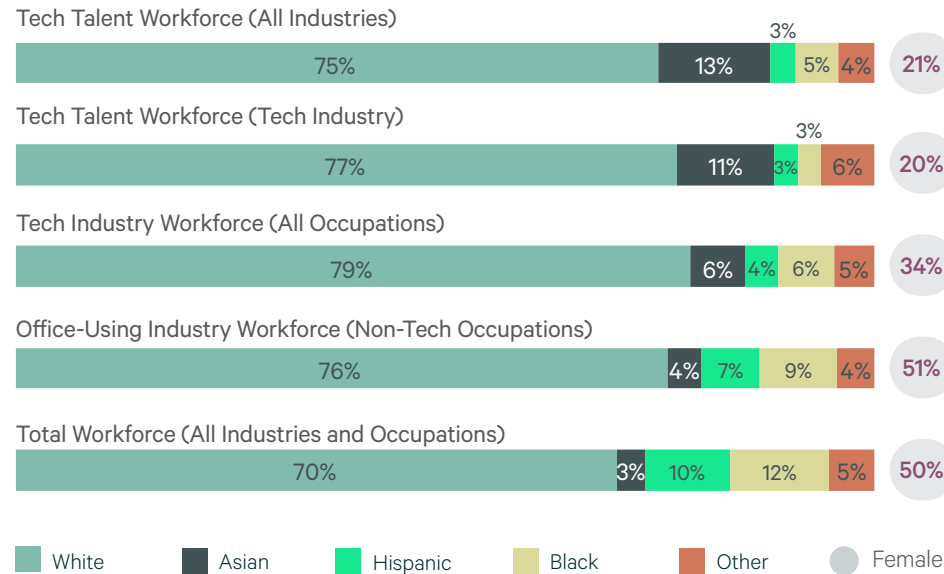
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

46.2% Kansas City vs 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

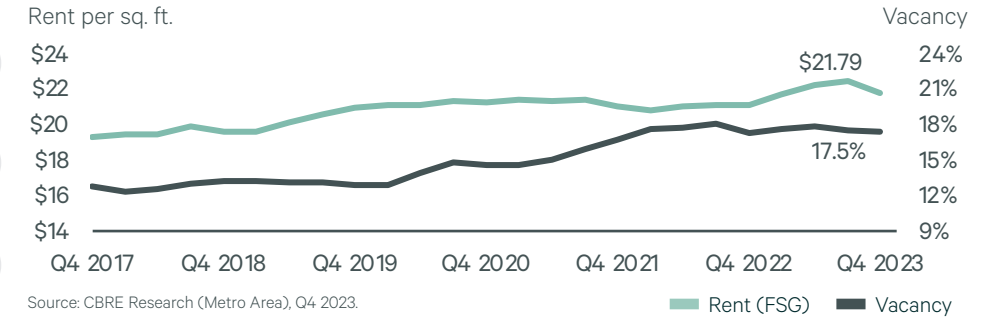
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	717	11%	73%	27%
Math/Statistics	64	31%	69%	31%
Other Tech Engineering	63	-50%	90%	10%
Totals	844	3%	74%	26%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	717	46%	24%	11%	12%	8%
Math/Statistics	64	82%	5%	2%	7%	4%
Other Tech Engineering	63	64%	13%	14%	5%	4%
Totals	844	51%	21%	10%	11%	7%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#31 Rank | \$49M Talent + \$1M Office Rent = \$50.2M Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

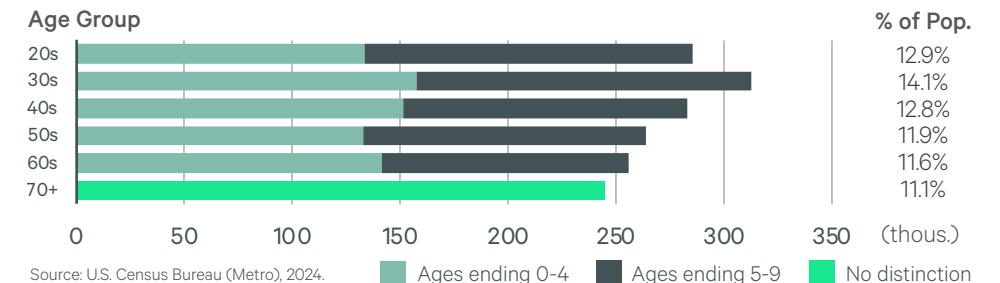
Average Apartment Rent (2023)

\$1,300 Per unit/month | 26.8% 5-year growth | 15.3% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 9,342 (3.4%) and 30s grew by 15,367 (5.2%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

34 Columbus

Score
38.24

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	49,560	-5.3%	\$100,318	8.3%
Software Developers & Programmers	18,160	13.0%	\$105,053	2.1%
Computer Support, Database & Systems	24,520	-14.2%	\$89,291	6.7%
Computer & Information Systems Managers	3,510	-5.9%	\$162,080	8.4%
Technology Engineering-Related	3,370	-14.2%	\$95,610	53.6%
Total Non-Tech Occupations	131,150	-0.9%	\$53,702	10.1%
Sales	27,070	12.8%	\$74,502	10.1%
Administrative & Office Support	10,110	2.0%	\$40,666	8.2%
Business Operations & Finance	82,700	-3.5%	\$77,099	8.5%
Marketing	11,270	-11.6%	\$74,502	10.7%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

28.9%	27.0%	8.1%	6.1%	5.6%
Core High-Tech*	FIRE**	Health	Government	Prof'l Services***

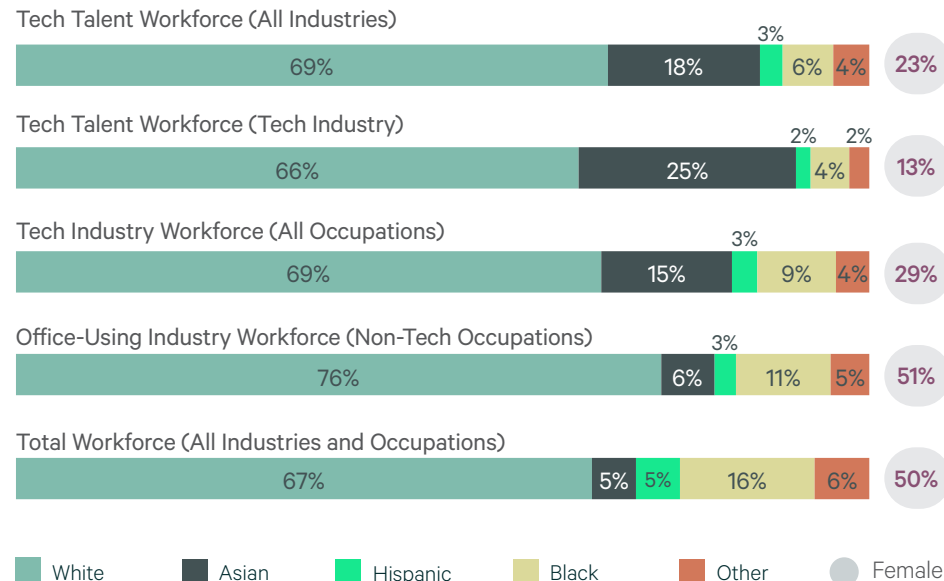
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

40.7% Columbus vs 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

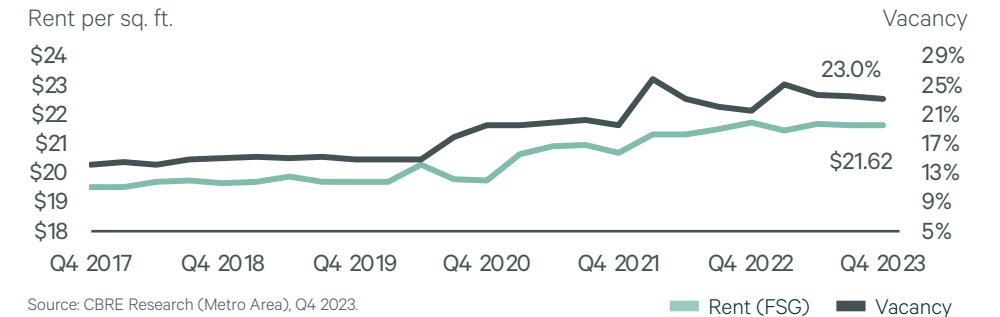
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	782	-9%	81%	19%
Math/Statistics	605	15%	63%	37%
Other Tech Engineering	1,115	-4%	80%	20%
Totals	2,502	-2%	76%	24%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	782	67%	20%	4%	6%	3%
Math/Statistics	605	70%	17%	6%	3%	5%
Other Tech Engineering	1,115	79%	9%	4%	4%	4%
Totals	2,502	73%	14%	4%	4%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#34 Rank | \$48M Talent + \$1M Office Rent = \$49.4M Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

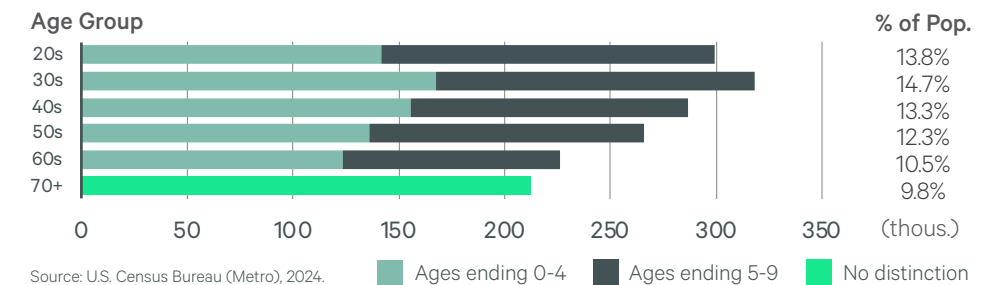
Average Apartment Rent (2023)

\$1,312 Per unit/month | 26.1% 5-year growth | 15.7% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 7,835 (-2.6%) and 30s grew by 11,364 (3.7%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

35 Pittsburgh

Score
37.96

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	39,580	-20.0%	\$97,569	26.0%
Software Developers & Programmers	14,560	3.5%	\$96,063	9.3%
Computer Support, Database & Systems	18,090	-26.1%	\$88,171	34.5%
Computer & Information Systems Managers	3,690	13.5%	\$154,020	7.2%
Technology Engineering-Related	3,240	-57.8%	\$95,895	40.9%
Total Non-Tech Occupations	121,470	-16.8%	\$54,405	21.4%
Sales	23,410	10.0%	\$79,815	17.8%
Administrative & Office Support	7,840	-12.5%	\$43,191	21.5%
Business Operations & Finance	81,600	-22.4%	\$75,628	5.2%
Marketing	8,620	-18.2%	\$79,815	28.6%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



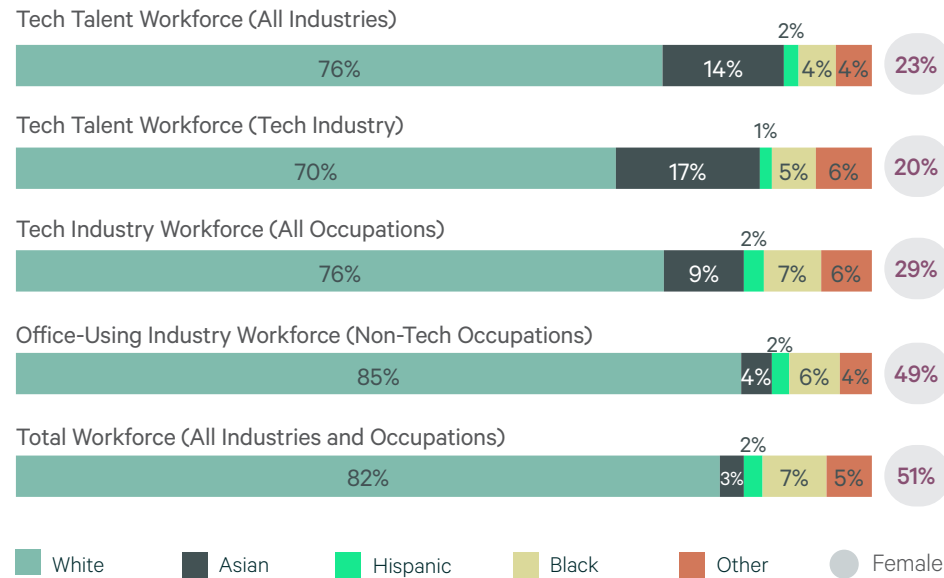
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

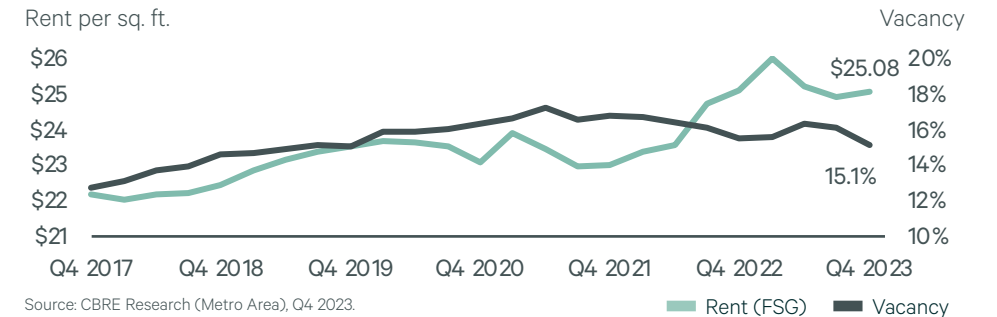
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	2,863	0%	64%	36%
Math/Statistics	714	1%	56%	44%
Other Tech Engineering	1,600	-12%	73%	28%
Totals	5,177	-4%	66%	34%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	2,863	62%	24%	5%	4%	4%
Math/Statistics	714	64%	27%	3%	2%	3%
Other Tech Engineering	1,600	60%	21%	9%	5%	5%
Totals	5,177	62%	24%	6%	4%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

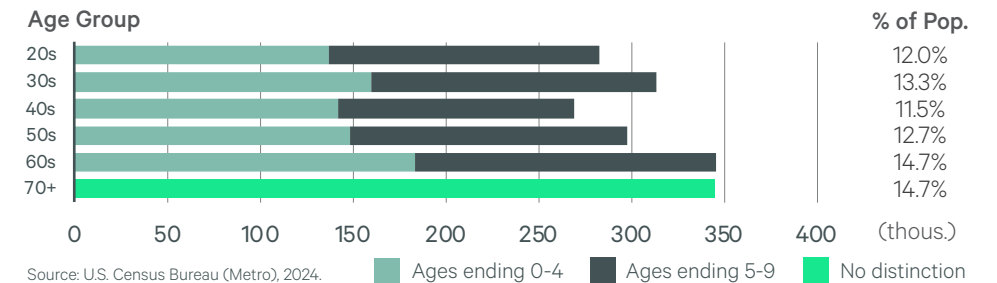
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 12,738 (-4.3%) and 30s grew by 29,972 (10.6%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

36 St. Louis

Score
37.56

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	53,780	-6.6%	\$99,090	14.8%
Software Developers & Programmers	18,660	13.5%	\$98,393	4.4%
Computer Support, Database & Systems	26,430	-17.9%	\$90,216	15.7%
Computer & Information Systems Managers	4,220	34.8%	\$152,380	12.0%
Technology Engineering-Related	4,470	-23.1%	\$107,646	29.2%
Total Non-Tech Occupations	147,750	-11.2%	\$55,899	18.6%
Sales	27,600	6.0%	\$77,807	19.8%
Administrative & Office Support	12,460	28.3%	\$44,349	21.1%
Business Operations & Finance	97,060	-15.1%	\$78,187	4.5%
Marketing	10,630	-34.8%	\$77,807	17.2%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



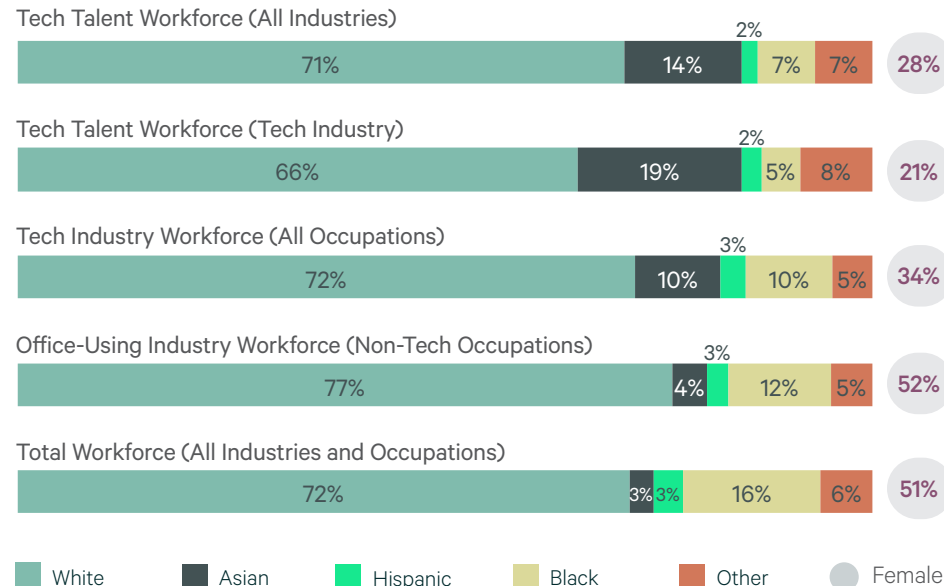
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

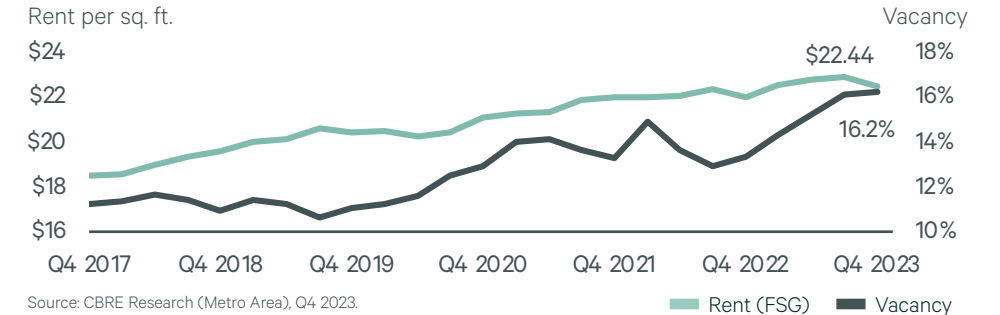
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,108	-4%	73%	27%
Math/Statistics	635	64%	55%	45%
Other Tech Engineering	779	-1%	78%	22%
Totals	2,522	8%	70%	30%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,108	64%	15%	5%	12%	4%
Math/Statistics	635	68%	13%	8%	8%	4%
Other Tech Engineering	779	73%	8%	8%	7%	3%
Totals	2,522	68%	12%	7%	10%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

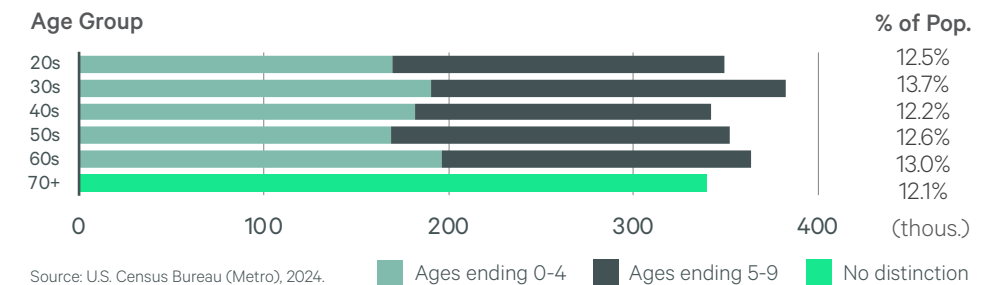
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 14,206 (-3.9%) and 30s grew by 9,209 (2.5%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

37 Nashville

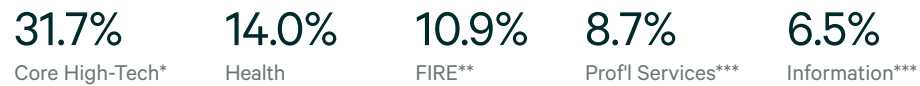
Score
34.76

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	40,190	28.9%	\$100,988	24.6%
Software Developers & Programmers	13,070	61.8%	\$106,706	19.7%
Computer Support, Database & Systems	19,950	15.3%	\$85,069	16.1%
Computer & Information Systems Managers	5,260	113.8%	\$155,740	24.0%
Technology Engineering-Related	1,910	-42.5%	\$85,788	24.3%
Total Non-Tech Occupations	131,650	6.4%	\$55,604	17.0%
Sales	25,710	21.6%	\$78,146	7.6%
Administrative & Office Support	8,240	24.8%	\$43,407	16.0%
Business Operations & Finance	85,690	3.1%	\$78,500	16.5%
Marketing	12,010	-7.0%	\$78,146	25.6%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



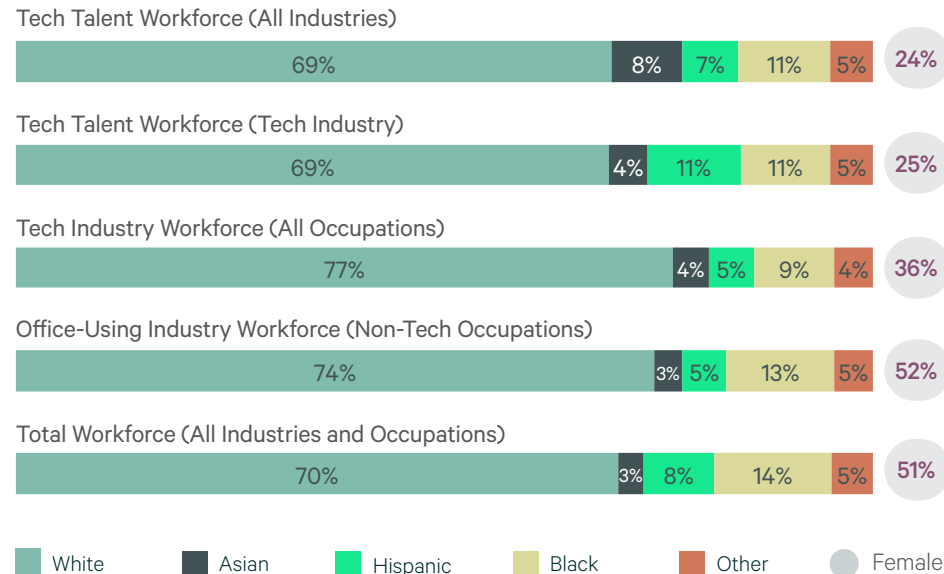
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

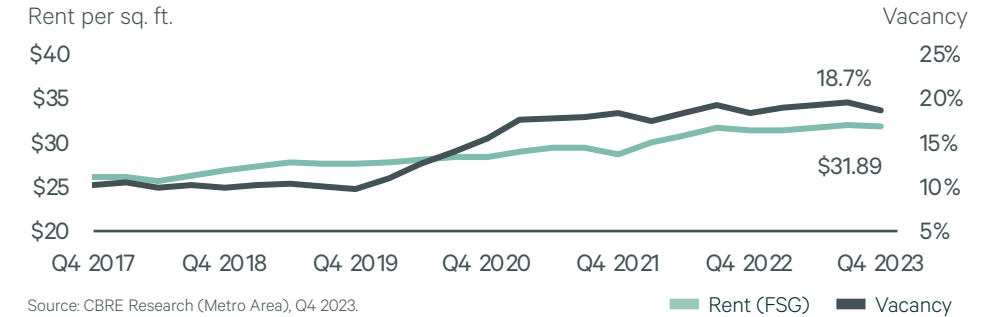
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	579	8%	68%	32%
Math/Statistics	363	-3%	72%	28%
Other Tech Engineering	311	12%	72%	28%
Totals	1,253	5%	70%	30%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	579	54%	23%	7%	13%	3%
Math/Statistics	363	70%	13%	7%	6%	4%
Other Tech Engineering	311	66%	8%	8%	12%	5%
Totals	1,253	62%	16%	7%	11%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

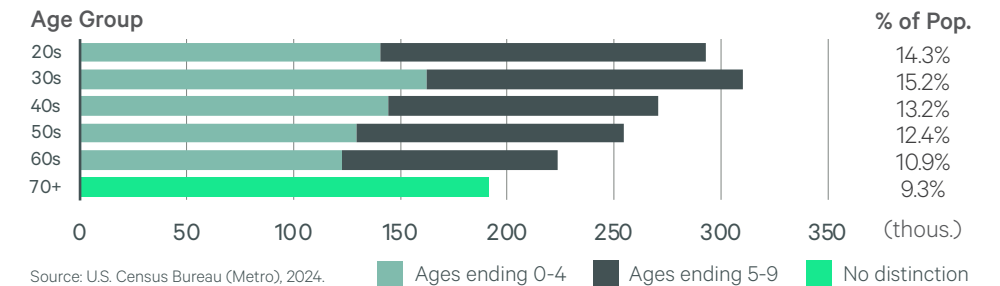
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 18,122 (6.6%) and 30s grew by 32,791 (11.8%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

38 Sacramento

Score
32.94

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	42,390	2.0%	\$116,764	23.6%
Software Developers & Programmers	12,100	-7.7%	\$128,063	30.4%
Computer Support, Database & Systems	23,030	22.0%	\$102,812	20.7%
Computer & Information Systems Managers	3,740	34.1%	\$173,380	15.7%
Technology Engineering-Related	3,520	-48.2%	\$113,406	25.3%
Total Non-Tech Occupations	105,970	-8.2%	\$64,016	32.6%
Sales	23,360	16.5%	\$89,473	27.8%
Administrative & Office Support	7,170	17.2%	\$49,997	27.9%
Business Operations & Finance	67,760	-15.8%	\$88,497	17.0%
Marketing	7,680	-12.3%	\$89,473	86.2%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

31.4%	30.1%	7.0%	6.6%	5.9%
Government	Core High-Tech*	Health	FIRE**	Prof'l Services***

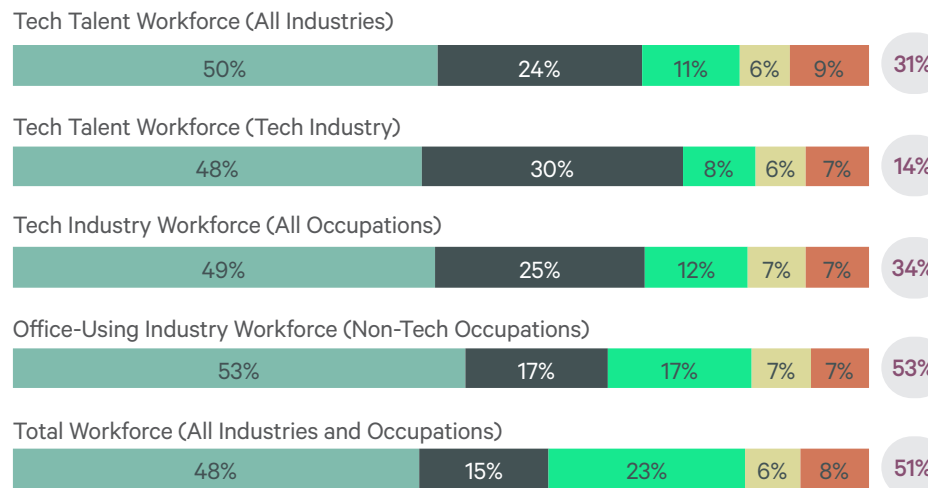
*Includes computer software and services and computer product manufacturing.
Finance, Insurance, Real Estate; *Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

48.4% Sacramento vs 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Legend: White, Asian, Hispanic, Black, Other, Female

Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

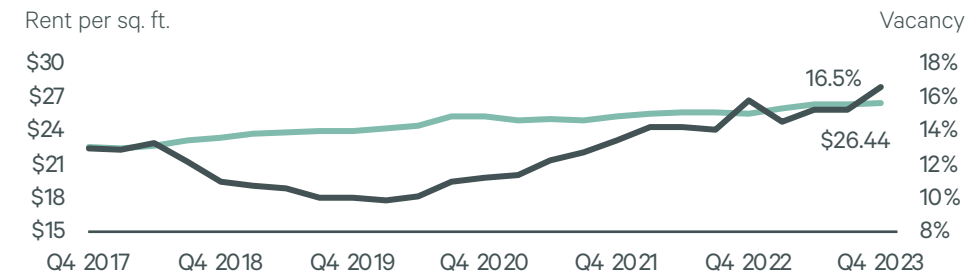
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,034	9%	76%	24%
Math/Statistics	579	-7%	59%	41%
Other Tech Engineering	792	-16%	83%	17%
Totals	2,405	-4%	74%	26%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,034	30%	49%	13%	2%	6%
Math/Statistics	579	31%	48%	15%	2%	5%
Other Tech Engineering	792	36%	28%	26%	3%	7%
Totals	2,405	32%	41%	19%	2%	6%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#20 Rank | \$52M Talent + \$2M Office Rent = \$53.9M Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

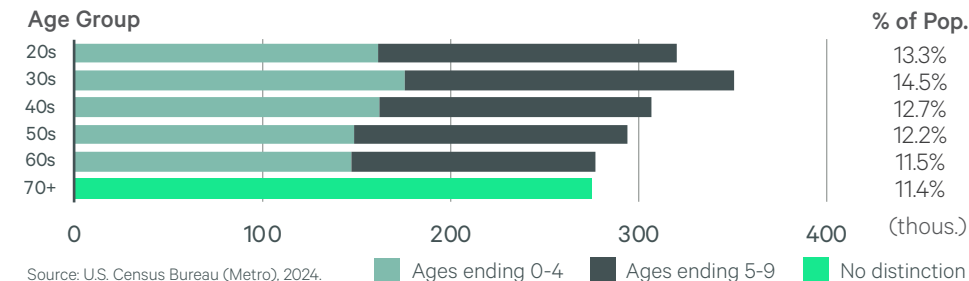
Average Apartment Rent (2023)

\$1,950 Per unit/month | 28.6% 5-year growth | 20.0% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 7,933 (-2.4%) and 30s grew by 32,391 (10.2%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

39 Indianapolis

Score
32.25

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	39,100	-1.4%	\$96,934	18.5%
Software Developers & Programmers	12,460	1.2%	\$99,512	15.4%
Computer Support, Database & Systems	20,780	-0.8%	\$88,174	17.7%
Computer & Information Systems Managers	3,720	29.6%	\$141,130	5.5%
Technology Engineering-Related	2,140	-39.4%	\$95,894	48.6%
Total Non-Tech Occupations	118,530	-4.1%	\$56,823	17.9%
Sales	23,820	26.6%	\$81,072	-1.8%
Administrative & Office Support	9,630	17.6%	\$43,926	19.9%
Business Operations & Finance	73,950	-10.5%	\$75,726	8.7%
Marketing	11,130	-20.1%	\$81,072	42.5%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

35.8%	14.6%	10.4%	9.5%	5.9%
Core High-Tech*	FIRE**	Prof'l Services***	Manufacturing***	Government

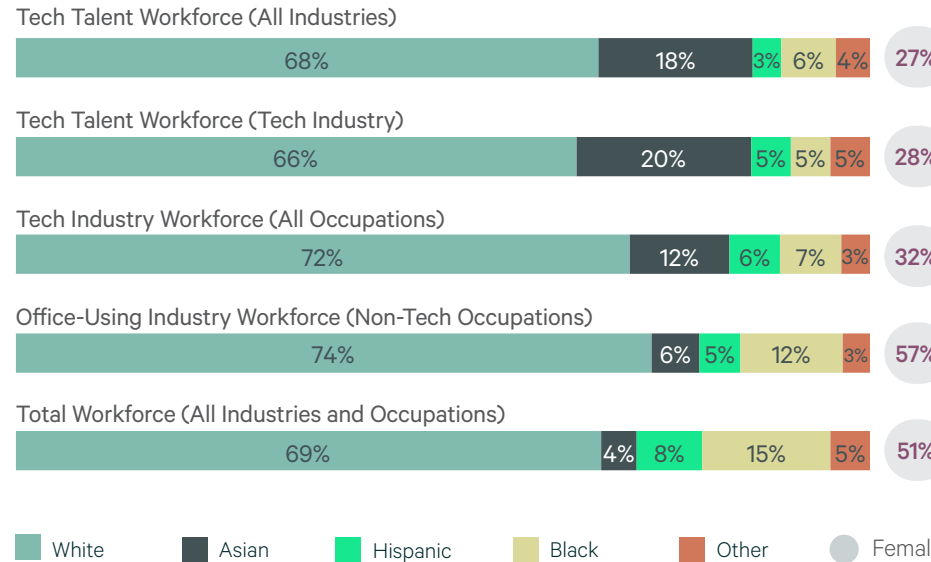
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

54.6% Indianapolis vs 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

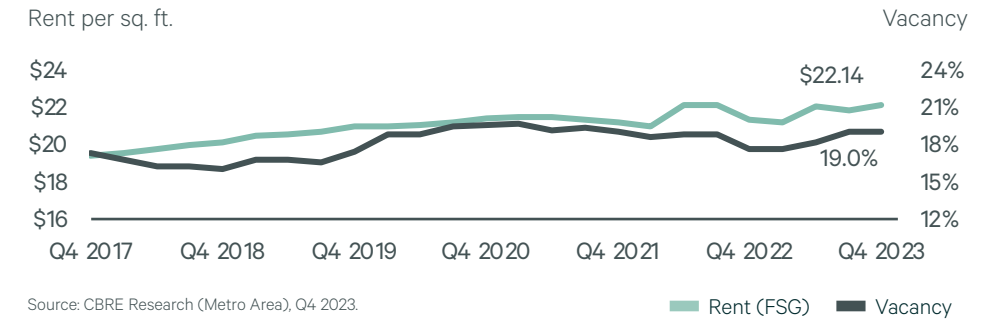
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	438	-9%	79%	21%
Math/Statistics	95	-10%	63%	37%
Other Tech Engineering	343	-19%	81%	19%
Totals	876	-13%	78%	22%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	438	70%	9%	8%	10%	3%
Math/Statistics	95	81%	5%	8%	0%	6%
Other Tech Engineering	343	78%	5%	7%	6%	4%
Totals	876	74%	7%	8%	7%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#40 Rank | \$46M Talent + \$1M Office Rent = \$47.6M Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

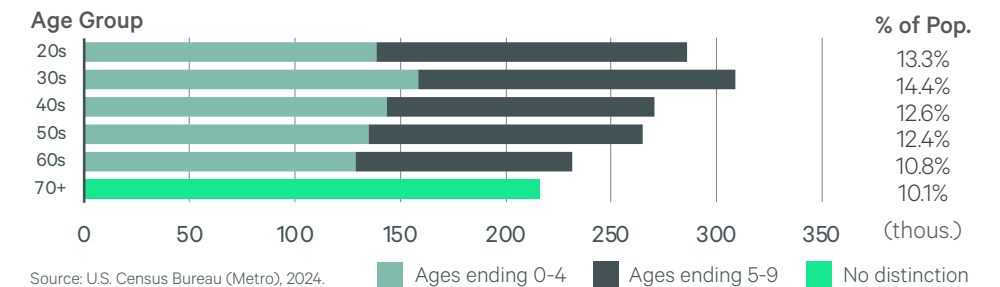
Average Apartment Rent (2023)

\$1,259 Per unit/month | 34.4% 5-year growth | 15.6% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 12,390 (4.5%) and 30s grew by 23,660 (8.3%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

40 Quebec City

Score
31.59

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	33,500	13.9%	\$95,077	33.0%
Software Developers & Programmers	8,700	13.0%	\$92,872	37.9%
Computer Support, Database & Systems	18,300	11.6%	\$93,018	28.5%
Computer & Information Systems Managers	1,500	15.4%	n/a	n/a
Technology Engineering-Related	5,000	25.0%	\$89,835	31.8%
Total Non-Tech Occupations	57,900	2.1%	\$69,181	22.0%
Sales	6,300	-25.0%	\$70,637	18.4%
Administrative & Office Support	21,400	-17.4%	\$56,014	23.8%
Business Operations & Finance	20,300	33.6%	\$80,309	15.4%
Marketing	9,900	37.5%	\$73,965	9.3%

*2023; ** 2018-2023; Source: Statistics Canada (Metro Area), April 2024. Data in C\$.

Top 5 Industries for Tech Talent Workforce (2022)



*Includes computer software and services and computer product manufacturing;

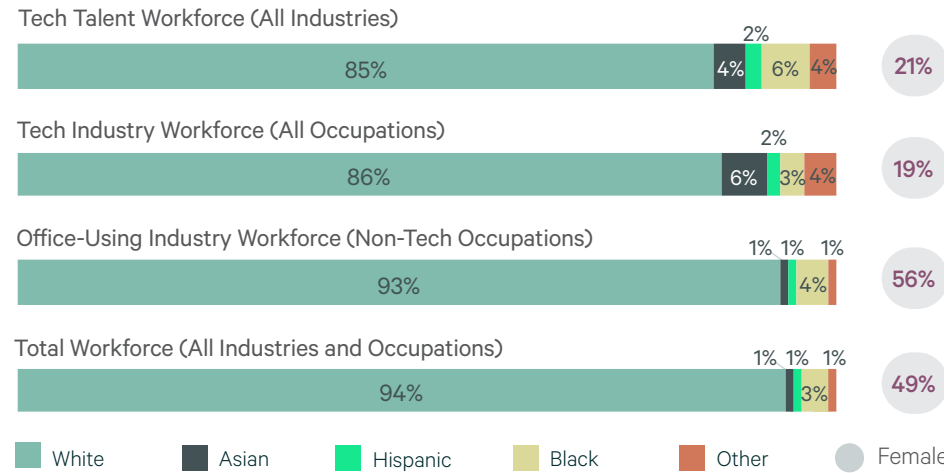
Finance, Insurance, Real Estate; *Excl high-tech. Source: Statistics Canada (Metro), April 2024 and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



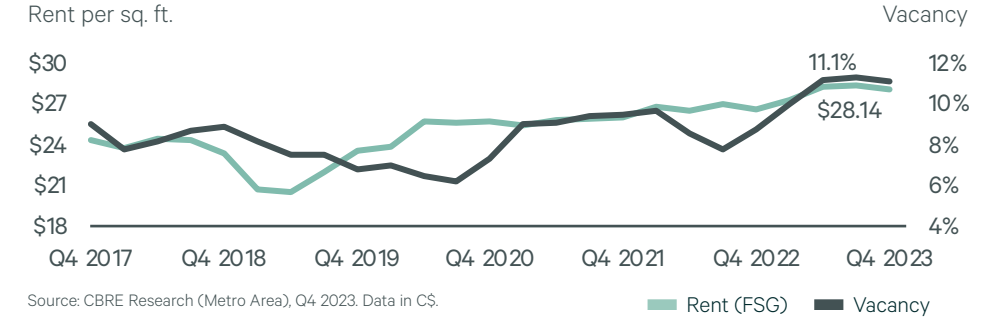
Source: Statistics Canada (Metro) and CBRE Research, April 2024.

Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	246	47%	81%	19%
Math/Statistics	38	-16%	66%	34%
Other Tech Engineering	211	-18%	81%	19%
Totals	495	5%	80%	20%

Source: Various Canadian Ministries of Education (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023. Data in C\$.

Annual Operating Costs (2023)



Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

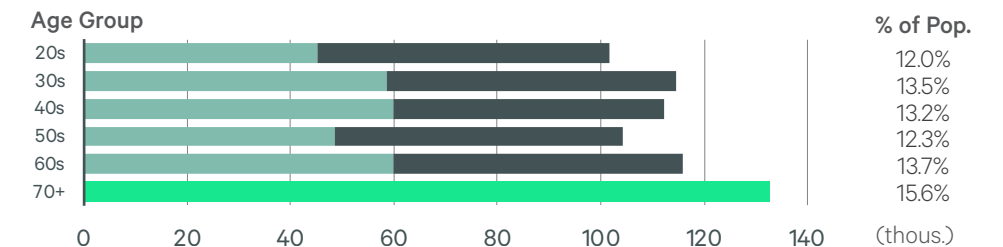
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023)
Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

Population Trends (2022)

20s declined by 5,121 (-4.8%) and 30s grew by 3,312 (3.0%) since 2017.



Source: Statistics Canada (Metro Area), 2024. Legend: Ages ending 0-4, Ages ending 5-9, No distinction

41 San Antonio

Score
30.79

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	36,970	9.8%	\$102,937	22.4%
Software Developers & Programmers	10,770	54.1%	\$110,044	11.0%
Computer Support, Database & Systems	19,550	-5.2%	\$91,498	16.5%
Computer & Information Systems Managers	3,550	166.9%	\$161,450	12.7%
Technology Engineering-Related	3,100	-34.5%	\$90,060	30.4%
Total Non-Tech Occupations	124,780	-5.0%	\$52,151	21.8%
Sales	22,620	19.6%	\$72,182	29.5%
Administrative & Office Support	7,260	27.8%	\$41,378	20.2%
Business Operations & Finance	84,040	-12.7%	\$76,129	5.1%
Marketing	10,860	3.2%	\$72,182	14.6%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



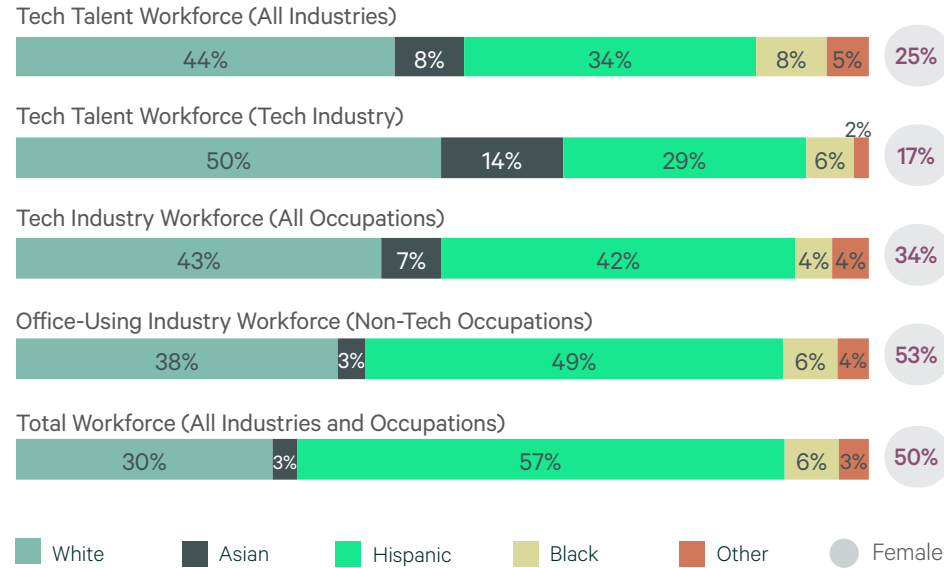
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

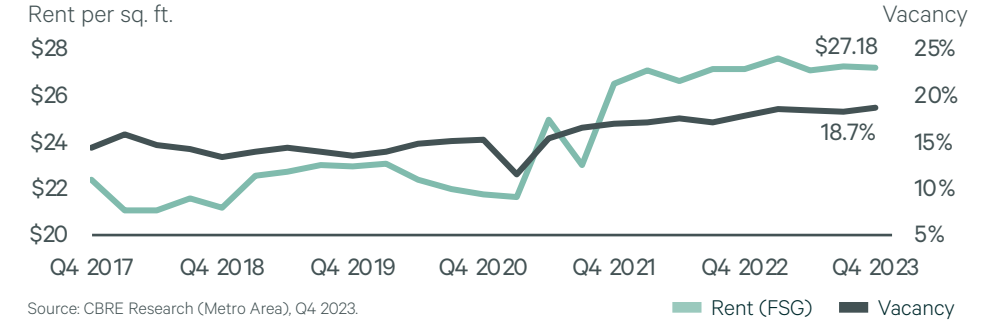
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,007	6%	77%	23%
Math/Statistics	161	1%	53%	47%
Other Tech Engineering	404	1%	81%	19%
Totals	1,572	4%	76%	24%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,007	32%	10%	46%	7%	5%
Math/Statistics	161	35%	5%	48%	7%	4%
Other Tech Engineering	404	31%	10%	50%	6%	3%
Totals	1,572	32%	10%	47%	7%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

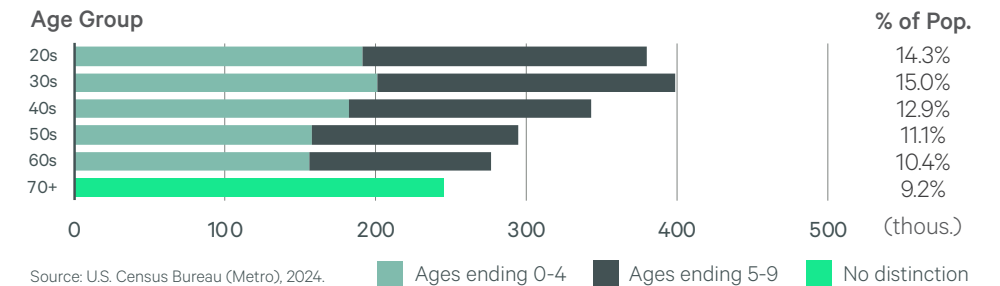
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 17,302 (4.8%) and 30s grew by 46,382 (13.2%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

42 Jacksonville

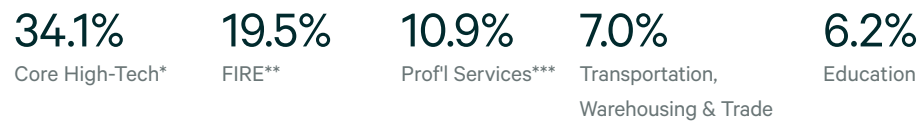
Score
30.10

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	24,960	5.8%	\$102,200	32.1%
Software Developers & Programmers	9,080	34.7%	\$109,646	30.2%
Computer Support, Database & Systems	12,050	-4.6%	\$89,337	24.4%
Computer & Information Systems Managers	2,140	46.6%	\$157,440	24.5%
Technology Engineering-Related	1,690	-38.8%	\$94,922	58.9%
Total Non-Tech Occupations	93,140	-0.1%	\$53,551	27.3%
Sales	16,140	32.1%	\$73,834	15.2%
Administrative & Office Support	6,010	43.4%	\$42,707	23.2%
Business Operations & Finance	62,370	-9.3%	\$77,074	19.7%
Marketing	8,620	7.6%	\$73,834	30.9%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



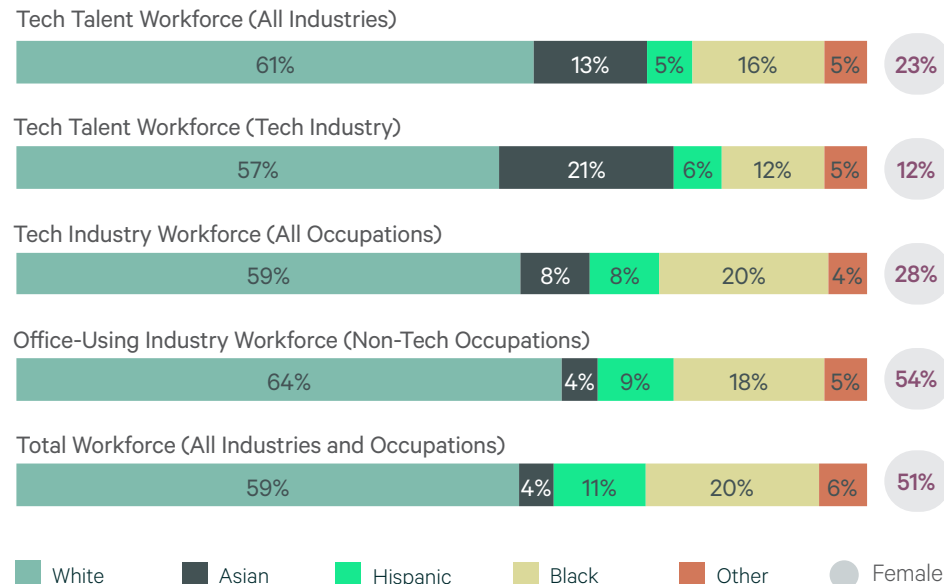
*Includes computer software and services and computer product manufacturing;
Finance, Insurance, Real Estate; *Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

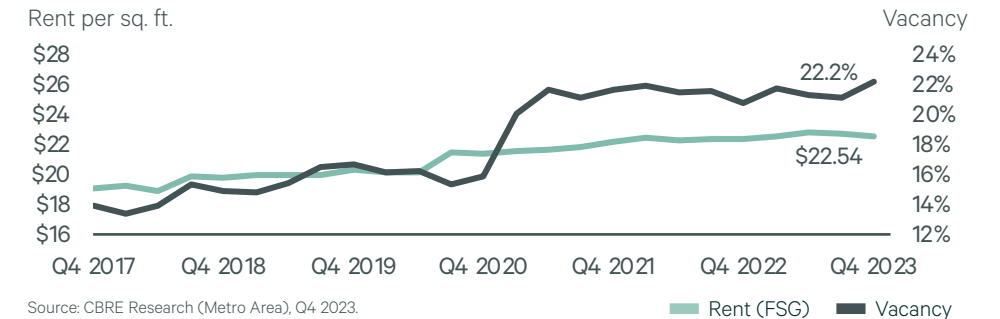
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	262	-10%	81%	19%
Math/Statistics	39	-34%	59%	41%
Other Tech Engineering	125	-7%	87%	13%
Totals	426	-12%	81%	19%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	262	61%	15%	11%	8%	5%
Math/Statistics	39	56%	15%	10%	13%	5%
Other Tech Engineering	125	61%	10%	11%	12%	5%
Totals	426	60%	14%	11%	9%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

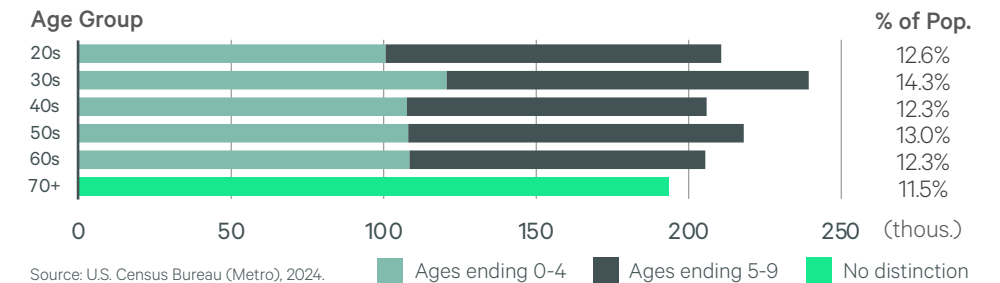
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023)
Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 5,690 (2.8%) and 30s grew by 37,359 (18.6%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

43 Hartford

Score
29.41

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	28,430	3.7%	\$111,601	15.6%
Software Developers & Programmers	13,260	57.7%	\$106,409	5.8%
Computer Support, Database & Systems	9,880	-23.6%	\$100,364	19.4%
Computer & Information Systems Managers	3,770	5.0%	\$162,620	14.8%
Technology Engineering-Related	1,520	-38.5%	\$107,850	29.8%
Total Non-Tech Occupations	59,730	-11.7%	\$60,868	14.5%
Sales	13,140	4.0%	\$80,383	7.8%
Administrative & Office Support	3,790	-3.6%	\$48,571	13.7%
Business Operations & Finance	39,500	-14.8%	\$87,305	12.0%
Marketing	3,300	-30.5%	\$80,383	13.8%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



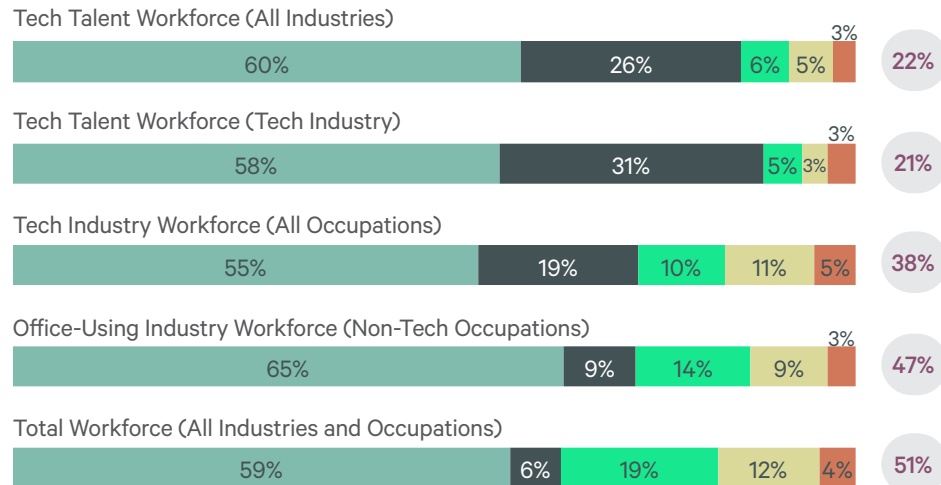
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

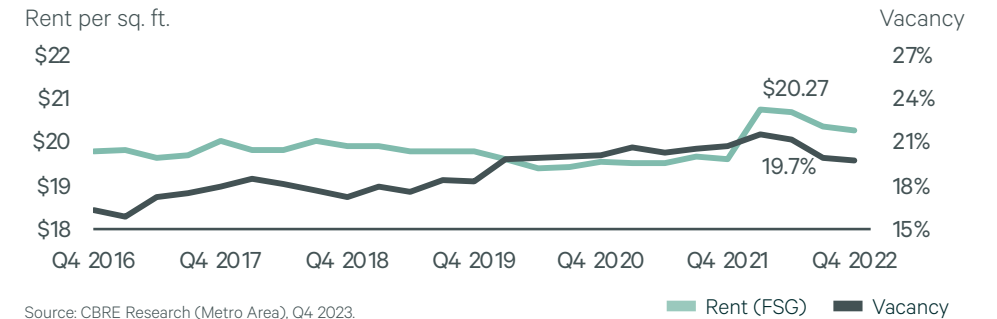
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	565	6%	72%	28%
Math/Statistics	438	-29%	58%	42%
Other Tech Engineering	656	-7%	81%	19%
Totals	1,659	-11%	72%	28%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	565	60%	19%	10%	8%	3%
Math/Statistics	438	66%	14%	10%	5%	5%
Other Tech Engineering	656	65%	13%	12%	5%	5%
Totals	1,659	63%	16%	11%	6%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



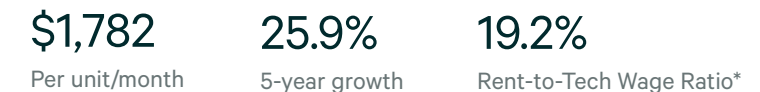
Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

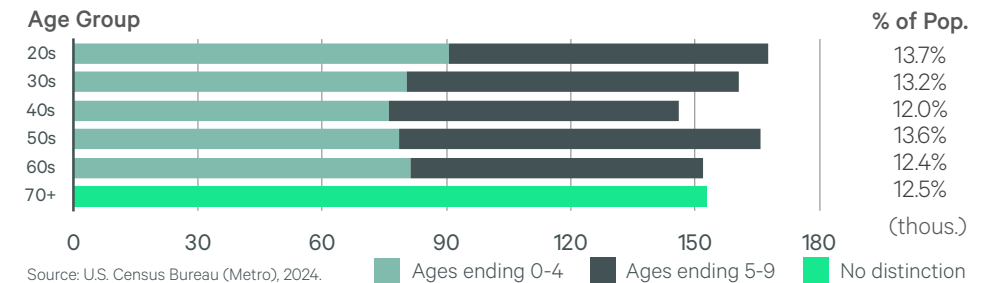
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 2,915 (1.8%) and 30s grew by 12,097 (8.1%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

44 Cincinnati

Score
29.00

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	39,880	-1.4%	\$99,639	18.5%
Software Developers & Programmers	15,130	37.2%	\$96,359	5.3%
Computer Support, Database & Systems	18,530	-17.8%	\$93,809	24.0%
Computer & Information Systems Managers	2,720	-15.0%	\$165,310	25.4%
Technology Engineering-Related	3,500	-4.1%	\$96,254	34.0%
Total Non-Tech Occupations	116,640	-7.9%	\$55,838	16.8%
Sales	22,440	10.6%	\$75,742	2.1%
Administrative & Office Support	8,960	0.6%	\$43,623	19.6%
Business Operations & Finance	73,910	-11.7%	\$78,076	11.3%
Marketing	11,330	-17.7%	\$75,742	21.1%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



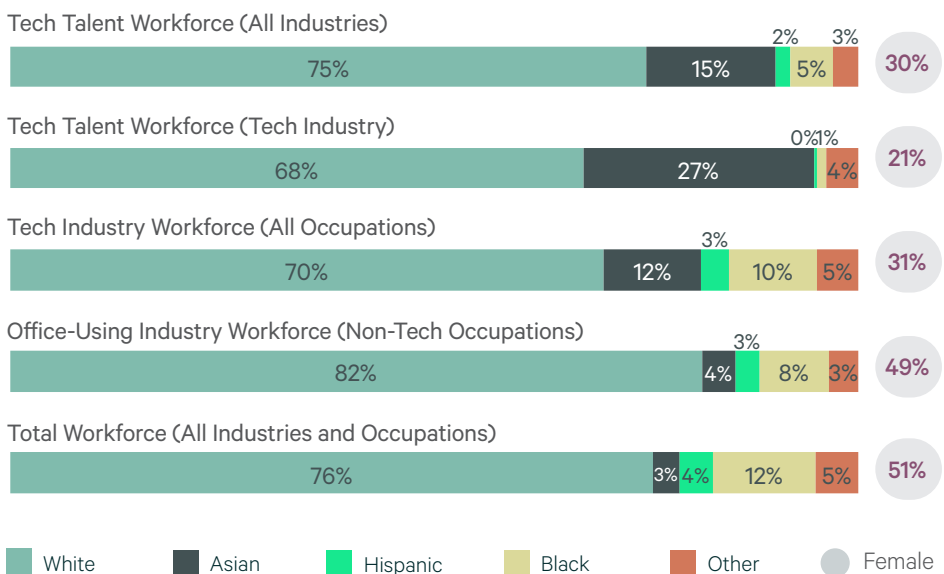
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

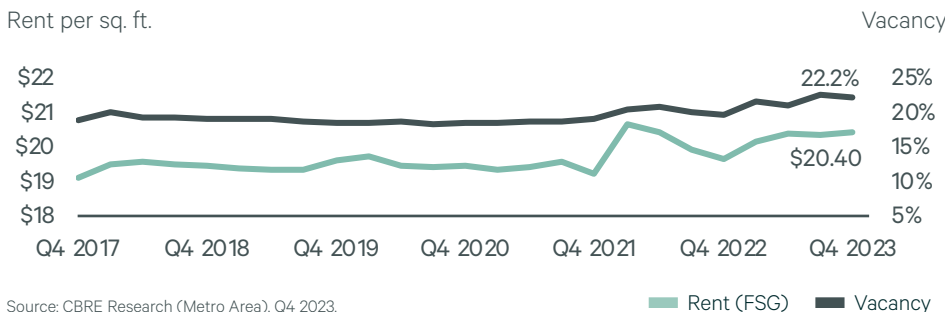
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,215	-4%	76%	24%
Math/Statistics	263	-10%	60%	40%
Other Tech Engineering	680	-13%	86%	14%
Totals	2,158	-8%	77%	23%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,215	73%	8%	4%	9%	5%
Math/Statistics	263	77%	10%	3%	5%	5%
Other Tech Engineering	680	82%	5%	4%	5%	5%
Totals	2,158	76%	7%	4%	7%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



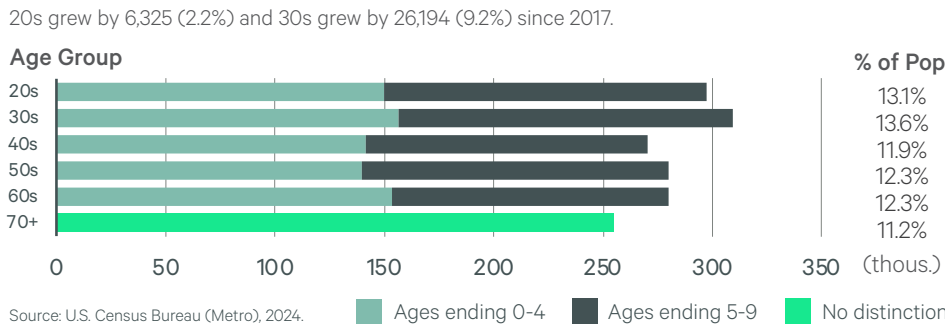
Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)



Source: U.S. Census Bureau (Metro), 2024.

45 Cleveland

Score
26.45

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	37,850	-0.3%	\$95,040	20.3%
Software Developers & Programmers	15,770	53.9%	\$88,281	13.6%
Computer Support, Database & Systems	16,370	-23.1%	\$88,648	20.6%
Computer & Information Systems Managers	2,770	6.1%	\$174,360	29.3%
Technology Engineering-Related	2,940	-23.0%	\$95,427	27.8%
Total Non-Tech Occupations	106,910	-14.1%	\$56,628	17.5%
Sales	22,680	8.9%	\$73,592	-1.4%
Administrative & Office Support	8,190	-1.3%	\$44,267	19.5%
Business Operations & Finance	66,290	-20.6%	\$79,339	10.4%
Marketing	9,750	-17.7%	\$73,592	17.0%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)

27.2%	16.2%	13.8%	9.1%	8.1%
Core High-Tech*	FIRE**	Health	Manufacturing***	Prof'l Services***

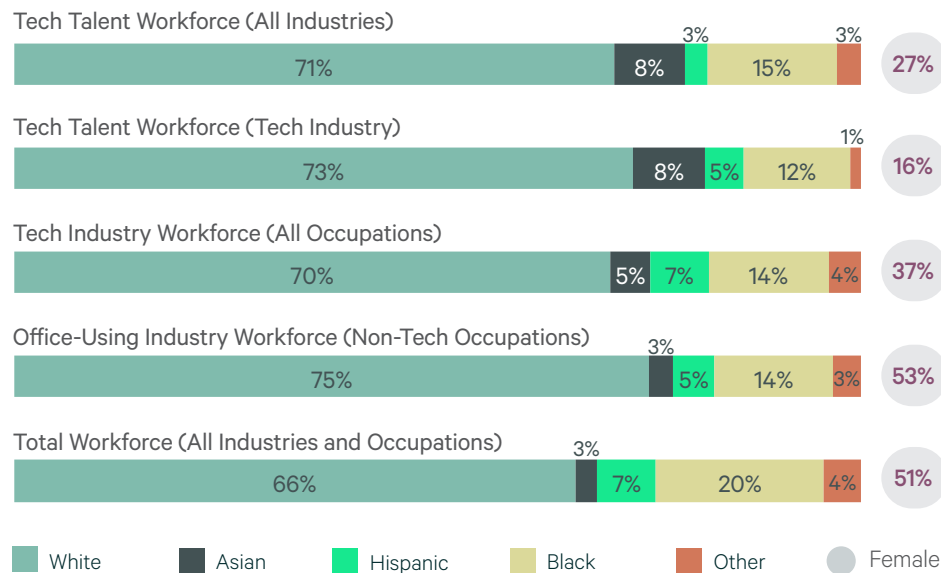
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)

34.4% Cleveland vs 52.0% U.S.

Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

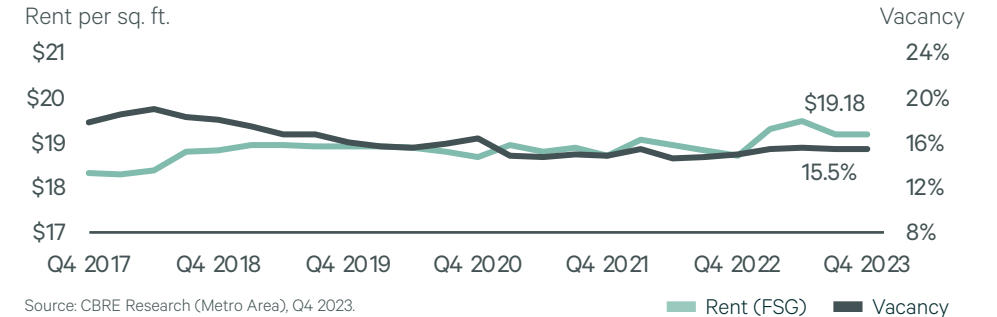
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	658	23%	76%	24%
Math/Statistics	143	-8%	63%	37%
Other Tech Engineering	524	3%	82%	18%
Totals	1,325	11%	77%	23%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	658	68%	18%	7%	3%	4%
Math/Statistics	143	73%	13%	9%	2%	4%
Other Tech Engineering	524	75%	8%	8%	3%	5%
Totals	1,325	72%	13%	8%	3%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)

#33 Rank | \$48M Talent + \$1M Office Rent = \$49.5M Total

Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

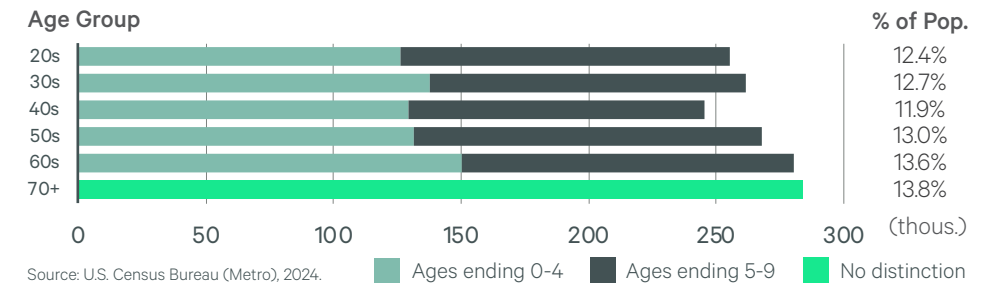
Average Apartment Rent (2023)

\$1,240 Per unit/month | 23.2% 5-year growth | 15.7% Rent-to-Tech Wage Ratio*

*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 7,279 (-2.8%) and 30s grew by 13,301 (5.4%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

46 Richmond

Score
24.74

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	28,290	1.2%	\$112,594	23.2%
Software Developers & Programmers	10,820	28.8%	\$122,208	24.2%
Computer Support, Database & Systems	13,150	-15.8%	\$96,812	14.5%
Computer & Information Systems Managers	2,000	32.5%	\$185,080	19.1%
Technology Engineering-Related	2,320	-4.5%	\$103,643	44.5%
Total Non-Tech Occupations	78,710	-2.4%	\$57,605	15.5%
Sales	17,370	14.0%	\$78,372	3.0%
Administrative & Office Support	6,190	8.2%	\$43,217	16.2%
Business Operations & Finance	48,800	-9.1%	\$83,037	7.1%
Marketing	6,350	5.3%	\$78,372	15.8%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



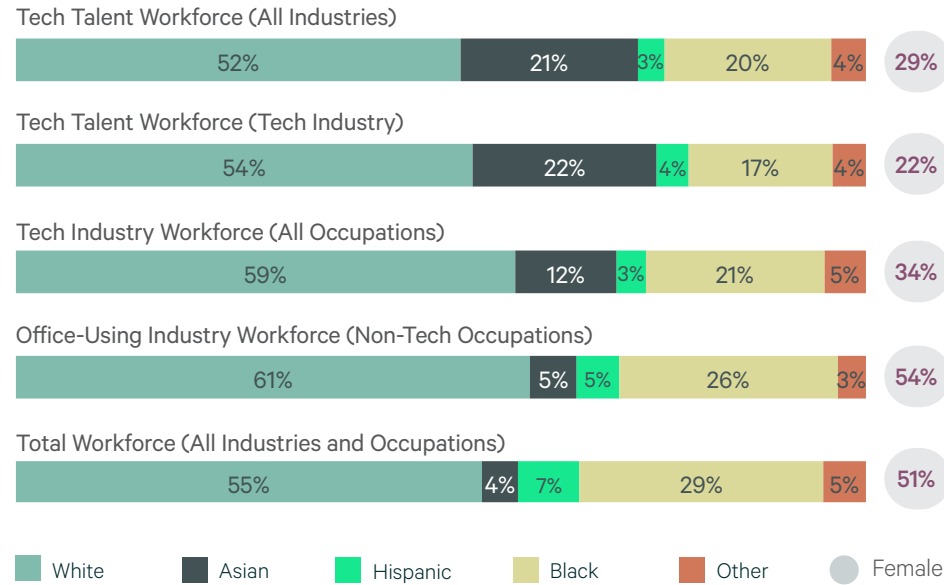
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

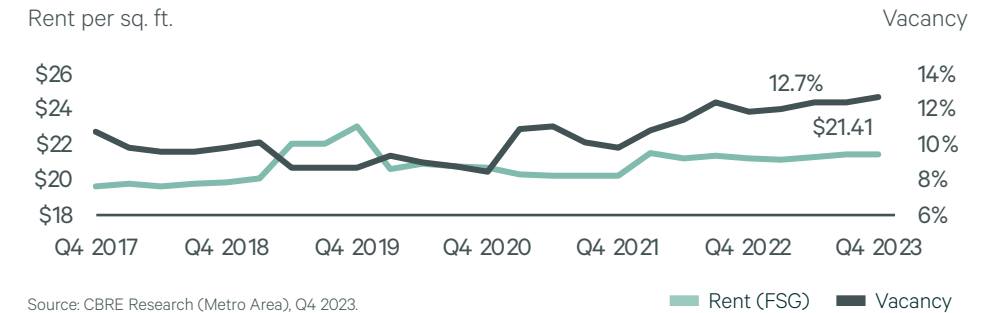
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	435	-8%	71%	29%
Math/Statistics	114	-10%	54%	46%
Other Tech Engineering	175	-11%	78%	22%
Totals	724	-9%	70%	30%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	435	38%	27%	9%	23%	3%
Math/Statistics	114	47%	21%	6%	19%	7%
Other Tech Engineering	175	60%	14%	14%	10%	3%
Totals	724	45%	23%	10%	19%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

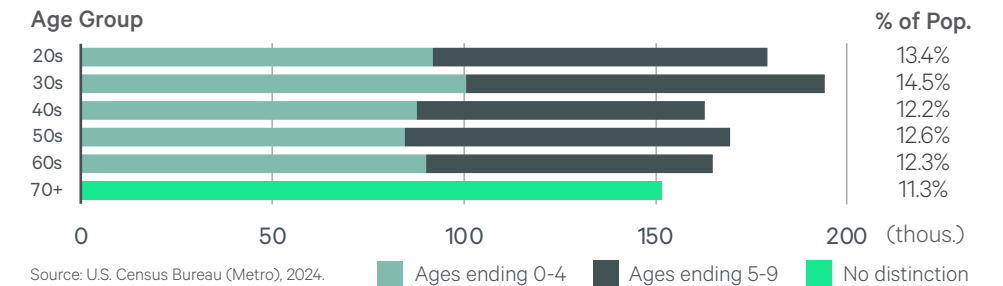
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s grew by 758 (0.4%) and 30s grew by 20,290 (11.7%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

47 Virginia Beach

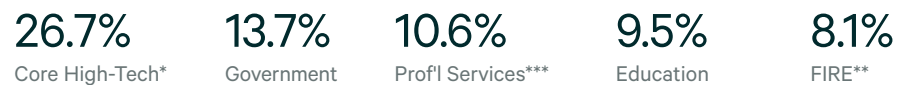
Score
23.88

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	30,580	0.4%	\$105,172	24.2%
Software Developers & Programmers	9,700	65.5%	\$113,639	18.7%
Computer Support, Database & Systems	14,900	-1.5%	\$95,328	18.8%
Computer & Information Systems Managers	1,530	28.6%	\$169,720	12.7%
Technology Engineering-Related	4,450	-46.3%	\$103,443	37.0%
Total Non-Tech Occupations	75,290	-10.9%	\$52,307	19.2%
Sales	15,340	13.7%	\$72,259	7.9%
Administrative & Office Support	4,320	15.8%	\$40,401	18.1%
Business Operations & Finance	49,080	-20.1%	\$76,264	4.9%
Marketing	6,550	12.0%	\$72,259	15.8%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



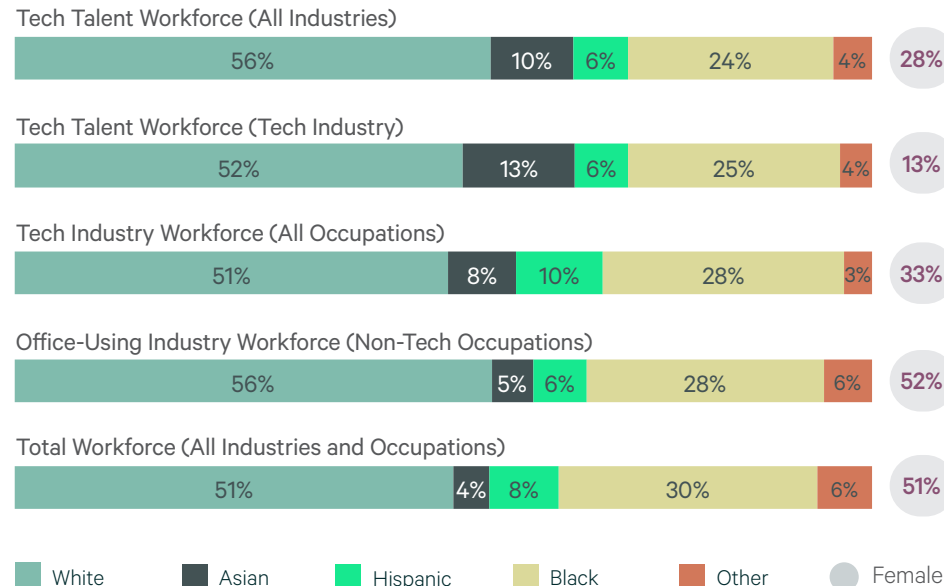
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

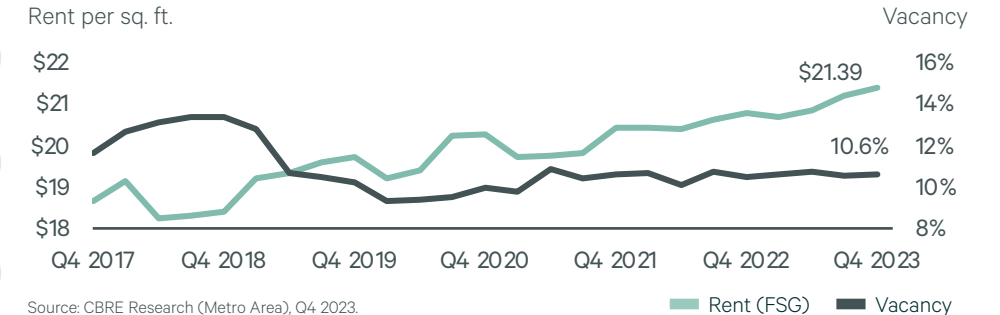
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	1,196	8%	76%	24%
Math/Statistics	230	83%	52%	48%
Other Tech Engineering	479	-4%	78%	22%
Totals	1,905	10%	74%	26%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	1,196	50%	9%	9%	26%	7%
Math/Statistics	230	71%	12%	5%	8%	4%
Other Tech Engineering	479	63%	6%	6%	19%	6%
Totals	1,905	55%	8%	8%	22%	6%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

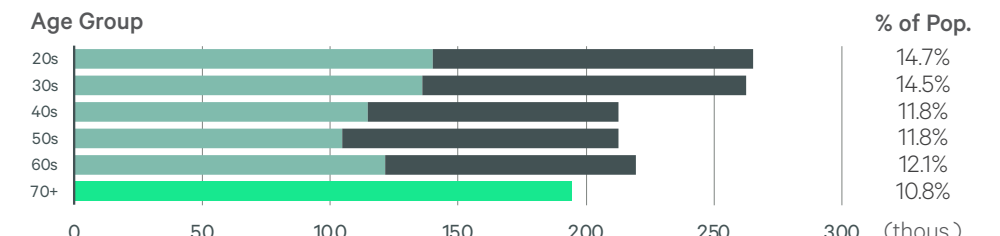
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 12,204 (-4.4%) and 30s grew by 20,351 (8.4%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

48 Milwaukee

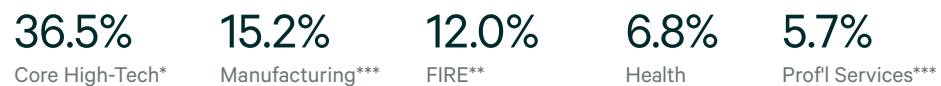
Score
23.11

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	34,160	2.5%	\$93,302	14.7%
Software Developers & Programmers	16,350	73.0%	\$89,265	2.3%
Computer Support, Database & Systems	12,610	-28.6%	\$88,583	20.1%
Computer & Information Systems Managers	2,040	-19.4%	\$160,700	25.6%
Technology Engineering-Related	3,160	-14.4%	\$90,996	29.2%
Total Non-Tech Occupations	94,790	-9.6%	\$57,484	21.6%
Sales	19,400	12.7%	\$78,541	20.8%
Administrative & Office Support	7,090	-5.1%	\$44,528	16.5%
Business Operations & Finance	60,050	-14.6%	\$80,935	16.2%
Marketing	8,250	-15.7%	\$78,541	36.1%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



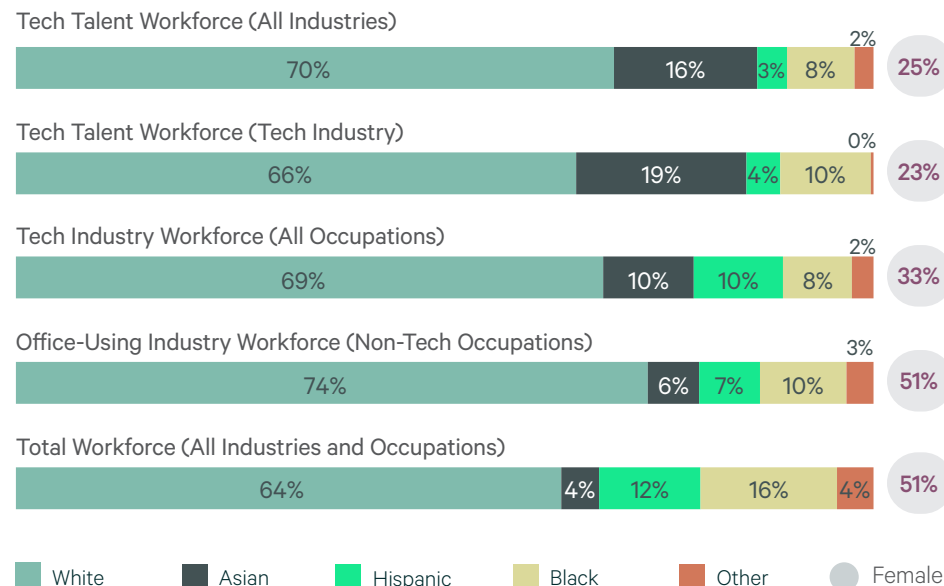
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

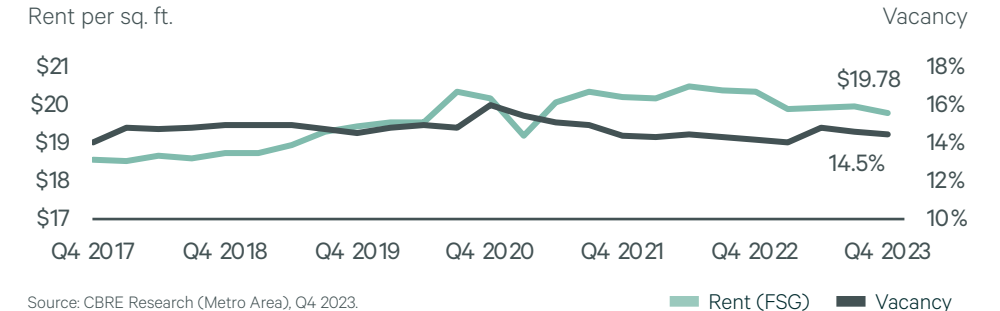
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	734	5%	78%	22%
Math/Statistics	63	-15%	63%	37%
Other Tech Engineering	626	-3%	84%	16%
Totals	1,423	0%	80%	20%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	734	66%	14%	10%	6%	4%
Math/Statistics	63	92%	0%	2%	4%	2%
Other Tech Engineering	626	74%	7%	12%	2%	5%
Totals	1,423	70%	11%	11%	4%	4%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

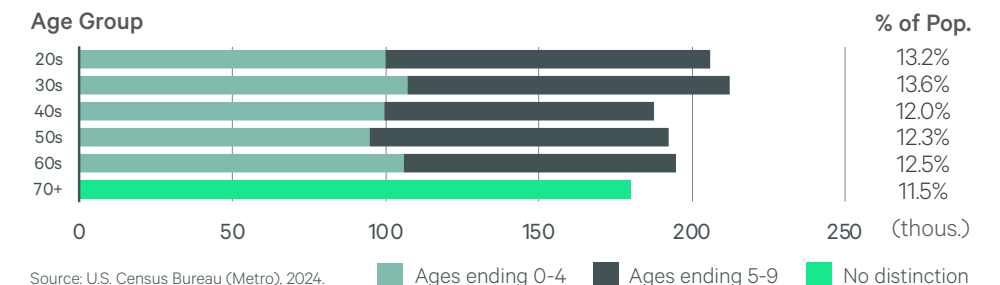
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 6,030 (-2.8%) and 30s declined by 2,895 (-1.3%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

49 Edmonton

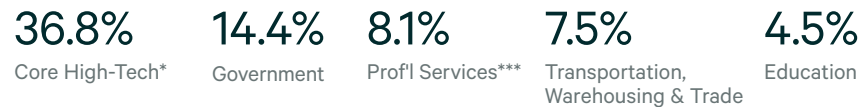
Score
21.12

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	33,400	24.2%	\$93,808	12.7%
Software Developers & Programmers	9,600	37.1%	\$98,758	28.7%
Computer Support, Database & Systems	16,700	50.5%	\$90,085	13.4%
Computer & Information Systems Managers	1,400	0.0%	n/a	n/a
Technology Engineering-Related	5,700	-23.0%	\$87,942	-1.8%
Total Non-Tech Occupations	97,100	-0.7%	\$67,018	2.4%
Sales	16,100	0.0%	\$74,859	-3.3%
Administrative & Office Support	46,100	-0.4%	\$56,493	8.7%
Business Operations & Finance	27,300	3.4%	\$78,374	4.6%
Marketing	7,600	-15.6%	\$73,362	-14.1%

*2023; ** 2018-2023; Source: Statistics Canada (Metro Area), April 2024. Data in C\$.

Top 5 Industries for Tech Talent Workforce (2022)



*Includes computer software and services and computer product manufacturing.

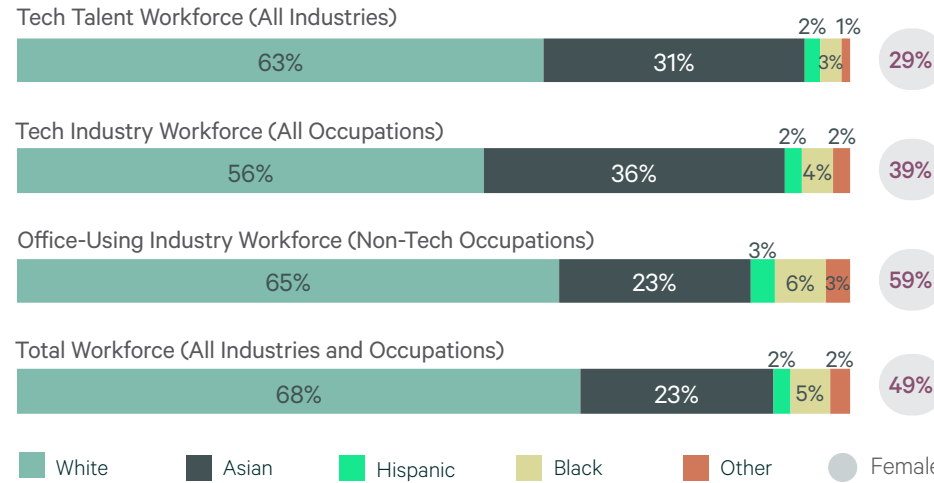
Finance, Insurance, Real Estate; *Excl high-tech. Source: Statistics Canada (Metro), April 2024 and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



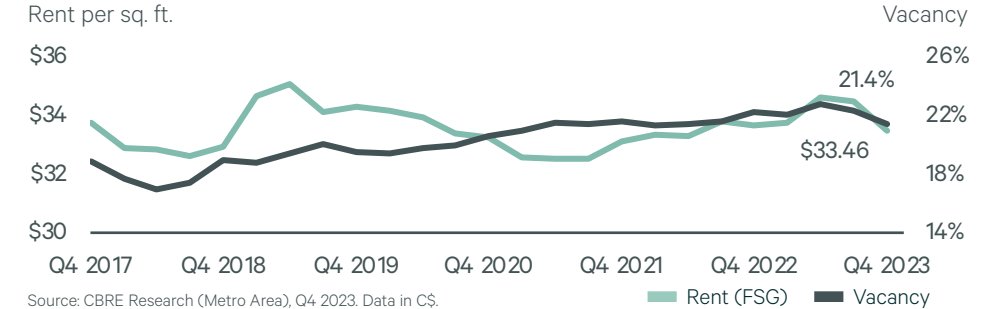
Source: Statistics Canada (Metro) and CBRE Research, April 2024.

Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	703	106%	72%	28%
Math/Statistics	210	32%	53%	47%
Other Tech Engineering	811	53%	80%	20%
Totals	1,724	67%	74%	26%

Source: Various Canadian Ministries of Education (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023. Data in C\$.

Annual Operating Costs (2023)



Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

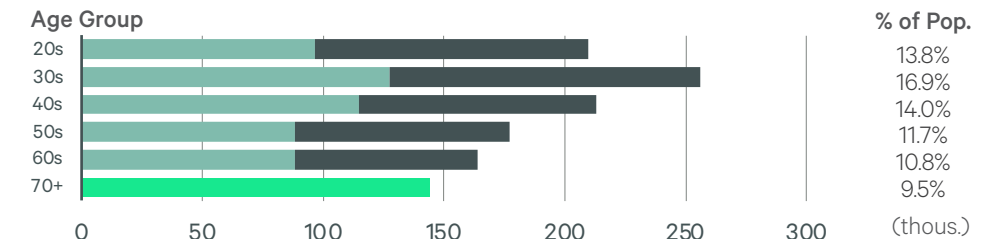
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023)
Source: Statistics Canada (Metro Area) April 2024, CBRE Research and CMHC (Metro) Q4 2023. Data in US\$.

Population Trends (2022)

20s declined by 5,015 (-2.3%) and 30s grew by 23,538 (10.1%) since 2017.



Source: Statistics Canada (Metro Area), 2024. Legend: Ages ending 0-4, Ages ending 5-9, No distinction

50 Inland Empire

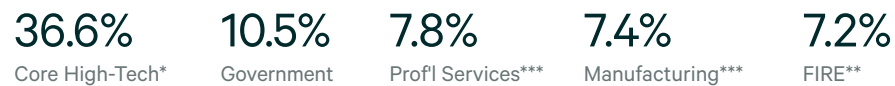
Score
17.18

Workforce Breakdown

	Employed*	5-Yr Growth**	Avg Wage*	5-Yr Growth**
Total Tech Occupations	28,090	27.3%	\$103,475	23.4%
Software Developers & Programmers	9,330	121.1%	\$106,969	13.7%
Computer Support, Database & Systems	12,720	7.6%	\$89,831	16.9%
Computer & Information Systems Managers	2,540	92.4%	\$168,670	13.8%
Technology Engineering-Related	3,500	-25.5%	\$100,996	35.8%
Total Non-Tech Occupations	126,300	-5.1%	\$57,826	30.6%
Sales	21,000	48.0%	\$79,931	34.4%
Administrative & Office Support	7,940	17.5%	\$47,970	25.0%
Business Operations & Finance	87,430	-13.5%	\$80,048	17.1%
Marketing	9,930	-10.1%	\$79,931	39.9%

*2023; ** 2018-2023; Source: U.S. Bureau of Labor Statistics (Metro Area), April 2024.

Top 5 Industries for Tech Talent Workforce (2022)



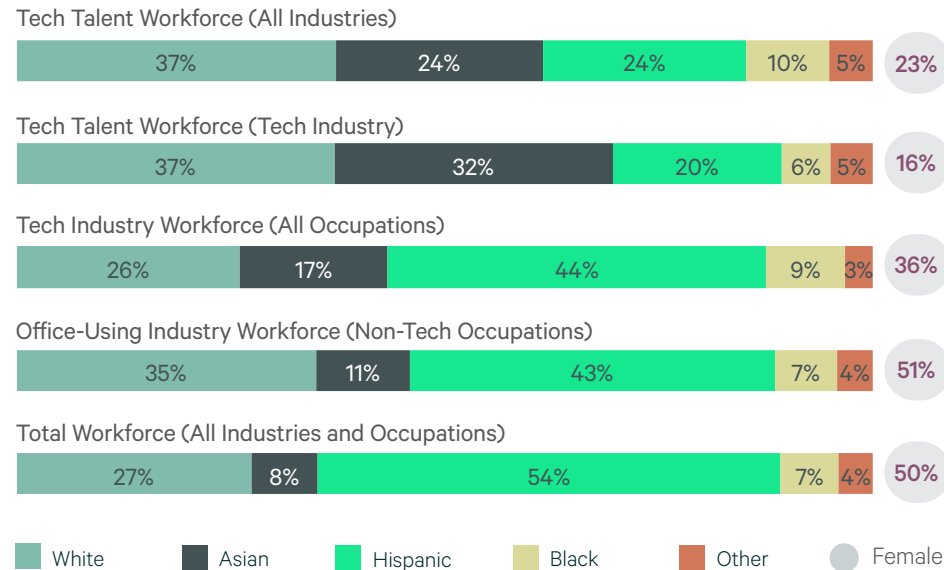
*Includes computer software and services and computer product manufacturing; **Finance, Insurance, Real Estate; ***Excl high-tech. Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

Software Engineers Employed in the Tech Industry (2022)



Source: U.S. Census (Metro), IPUMS, Statistics Canada (Metro) and CBRE Research, April 2024.

Workforce Diversity (2022)



Source: U.S. Census (Metro), IPUMS and CBRE Research, April 2024.

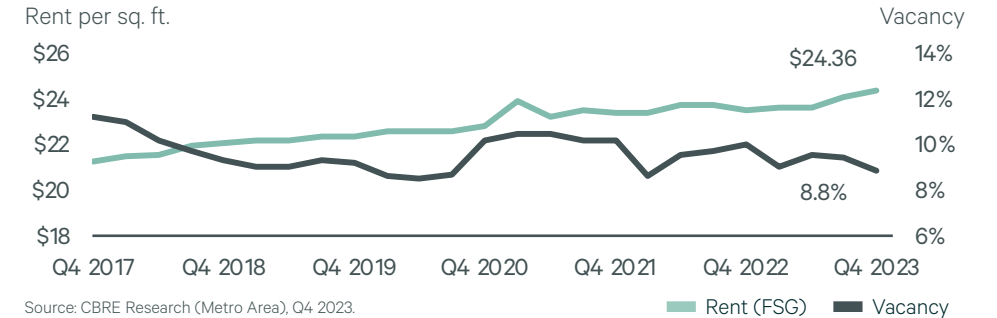
Talent Pipeline & Diversity

Degree Completions (2022)	Total	Growth 2017-22	Male	Female
Computer Engineering	882	-6%	82%	18%
Math/Statistics	392	9%	50%	50%
Other Tech Engineering	368	-10%	83%	17%
Totals	1,642	-4%	75%	25%

Degree Completions (2022)	Total	White	Asian	Hispanic	Black	Other
Computer Engineering	882	26%	32%	33%	6%	4%
Math/Statistics	392	16%	29%	49%	1%	4%
Other Tech Engineering	368	31%	28%	29%	3%	8%
Totals	1,642	24%	30%	36%	4%	5%

Source: The National Center for Education Statistics (Region), 2024.

Office Rent & Vacancy Trends



Source: CBRE Research (Metro Area), Q4 2023.

Annual Operating Costs (2023)



Source: U.S. Bureau of Labor Statistics April 2024, CBRE Research (Metro) Q4 2023.

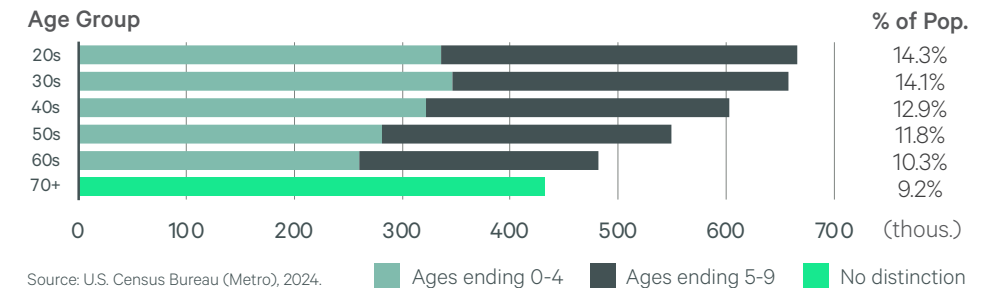
Average Apartment Rent (2023)



*Ratio of annualized apartment rent (2023) to average annual wage for tech talent occupations (2023). Source: Bureau of Labor Statistics April 2024, CBRE Research (Metro) and Axiometrics (Metro) Q4 2023.

Population Trends (2022)

20s declined by 19,498 (-2.8%) and 30s grew by 42,304 (6.9%) since 2017.



Source: U.S. Census Bureau (Metro), 2024.

Contacts

Visit the [Scoring Tech Talent website](#) for an interactive report overview. For related research, please view [Tech-30](#) and [Tech Insights](#).

Report Contacts

Colin Yasukochi

Executive Director
CBRE Tech Insights Center
colin.yasukochi@cbre.com

Christina Cattana

Research Manager
Canada Research
christina.cattana@cbre.com

Jacob Cottrell

Senior Research Analyst
Global Research
jacob.cottrell@cbre.com

Jenna De Avila

Research Analyst
Americas Research
jenna.deavila@cbre.com

Luis Flores

Senior Research Analyst
Americas Research
luis.flores5@cbre.com

Giovanni Giannotta

Research Manager
Americas Research
giovanni.giannotta@cbre.com

Rebecca Schmidt

Senior Research Analyst
Americas Research
rebecca.schmidt@cbre.com

Consulting

Chris Volney

Managing Director
Americas Consulting | Labor Analytics
chris.volney@cbre.com

Yazmin Ramirez

Director, Latin America
Americas Consulting | Labor Analytics
yazmin.ramirez@cbre.com

Research

Richard Barkham, Ph.D.

Global Chief Economist
Head of Global Research &
Head of Americas Research
richard.barkham@cbre.com

Julie Whelan

Senior Vice President
Global Head of Global Occupier
Thought Leadership
julie.whelan@cbre.com

Occupier Services

Jamie Georgas

Executive Managing Director
Technology Practice Group
jamie.georgas@cbre.com

Erica Stricker

President, Technology Sector
Global Workplace Solutions
erica.stricker@cbre.com

Lukas Ault

Senior Director, Americas
Client Strategy & Consulting
Lukas.ault@cbre.com

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