

MINNESOTA
**The State of
Tech Talent**

NOVEMBER 2023



mntech
Minnesota Technology Association



Thank You to Our Event Sponsors

GOLD SPONSORS



SILVER SPONSOR



BRONZE SPONSORS



THOMSON REUTERS®

HOST SPONSOR



Welcome to Tech Talent 2023

OCTOBER 27, 2023

What a difference a year makes. When we convened leaders from our state's business, education, government, and social sectors last November to address the challenges faced by employers in hiring appropriately skilled tech talent, the disparity between employer demand and available supply was significant. Since then, the pace of hiring for IT roles in Minnesota has cooled considerably, with just 6,180 unique job postings in September 2023 compared to 16,213 in the same period last year.

At a time when companies are tapping the brakes on new tech hiring, it's critically important we don't take our eye off the ball and remain focused on the long-term workforce challenges we face. In fact, the number of new technologists needed to fill projected job openings in Minnesota over the next 10 years has increased, mostly as a function of changing demographics and reduced labor force participation. Recent data from CompTIA/Lightcast projects a need to fill more than 92,000 tech job openings through 2033, which nearly equates to the total number of IT professionals working in Minnesota today.

In the pages that follow, we're pleased to share current data on the size, scale, and composition of Minnesota's tech workforce, the most in-demand jobs, and highlight opportunities to improve how we inspire, hire, and develop tech talent.

The tech workforce challenges we face as a state are not inconsequential. It will take all of us, working together, to develop the more accessible and equitable pathways into technology careers that will expand Minnesota's supply of homegrown tech talent, meet the business needs of tech-enabled employers, and fuel our state's innovation economy for years to come.

Let's make it happen!



A handwritten signature in black ink, reading "Jeff Tollefson". The signature is fluid and cursive, with the first letters of the first and last names being capitalized and prominent.

Jeff Tollefson
President & CEO
Minnesota Technology Association

About MnTech

The Minnesota Technology Association (MnTech) is a coalition of nearly 200 member companies united in building a stronger tech ecosystem and innovation economy in Minnesota. MnTech works to ensure that Minnesota's technology-driven companies have access to exceptional talent, dedicated public policy advocates, and are part of an innovative, inclusive technology community. Learn more at mntech.org and meet our board members below.

Dan Abdul

Chief Technology Officer
Medica

Sameer Badlani

Chief Information Officer
Fairview Health Systems

Matt Bailey

Senior Executive
IBM

Teddy Bekele

Chief Technology Officer
Land O'Lakes

Andy Bingenheimer

Chief Information Officer
U.S. Bank

Tawanna Black

CEO
Center for Economic Inclusion

Kevin Boeckenstedt

VP - Commercial Operations
Thrivent

Robin Brown

Chief Information Officer
Cirrus Aviation

Doug Carnival

Partner
McGrann Shea Carnival

Julie Durham

Chief Technology Officer
United HealthCare

Lucinda DuToit

VP Human Resources
Digineer

Sarah Engstrom

Chief Information Security Officer
CHS, Inc.

Amy Fisher

SVP Technology
Padilla

Amka Hodzic

Director - Technology Center
Microsoft

Chris Howe

CEO
Rise & Shift, Turnberry Solutions

Tammylynn Jonas

Chief Information Officer
Donaldson

Pat Joyce

CISO (retired)
Medtronic

Sri Koneru

Chief Information Officer
Winnebago Industries

Jake Krings

VP - Digital
Target

Wolf Lewis

Vice President
Comcast Business

Rachel Lockett

Chief Information Officer
Pohlad Companies

Rebecca Martin

Chief Marketing Officer
Total Expert

Cy Morton

Partner
Robins Kaplan

Meredith Murphy

Principal
Grant Thornton

Hany Omar

Managing Director
Accenture

Anudeep Parhar

Chief Information Officer
Entrust

Tim Peterson

Chief Information Officer
Xcel Energy

Rakhi Purohit

VP of Technology
Thomson Reuters

Matt Reck

Chief Financial Officer
Fortra

Chris Rence

Chief Digital Officer
Equus Holdings

PJ Ritters

Partner
PwC

Sarah Seger

Sr. Director Talent Transformation
Best Buy

Jamie Thingelstad

Chief Technology Officer
SPS Commerce

Jeff Tollefson

CEO
Minnesota Technology Association

Beth Tschida

Chief Technology Officer
Jamf

Sharon Kennedy Vickers

CEO
Software for Good

Paul Weirtz

State President (retired)
AT&T

Role of the Tech Sector in MN's Economy

Within Minnesota, the tech sector continues to play a vital role in the overall state's economy and total employment. Technology also plays a driving role in new business creation, and Minneapolis ranks 2nd in the Midwest for startups, building our next generation of tech innovators and fueling Minnesota's innovation economy.

108,638

TECH OCCUPATION JOBS
(ex. software developer)

\$36.1B

ECONOMIC IMPACT
(estimated direct
impact of tech sector)

7.7%

**ECONOMIC IMPACT OF TECH AS
% OF OVERALL STATE ECONOMY**

72,547

**UNIQUE TECH OCCUPATION JOB
POSTINGS OVER LAST 12 MONTHS**

11,332

TECH BUSINESS ESTABLISHMENTS
(firms with payroll)

6.2%

**NET EMPLOYMENT AS A % OF
OVERALL WORKFORCE**

\$101,365

**ESTIMATED MEDIAN
TECH WAGE •
106% HIGHER THAN
MEDIAN STATE WAGE**



mntech****
Minnesota Technology Association

Minnesota Talent: Current and Future

Minnesota has historically been a home for strong tech employment. This position is receding. **This trend is expected to continue as technology job growth in our state is low.**



NUMBER OF TECHNOLOGY WORKERS NEEDED OVER THE NEXT 10 YEARS (2023-2033)

SOURCE: LIGHTCAST | US BUREAU OF LABOR STATISTICS | COMPTIA



Projected number of NEW TECHNOLOGISTS NEEDED due to NEW JOB GROWTH	8,932
Projected number of REPLACEMENT TECHNOLOGISTS NEEDED due to workers retiring, leaving tech or leaving the region	83,600
TOTAL PROJECTED NUMBER OF NEW TECHNOLOGISTS NEEDED in Minnesota by 2033	92,537

It will take a collective effort from companies investing in current employees and modifying their hiring practices combined with a rapid increase in the equitable development of new technologists to meet this demand.

Top Occupations

Technologists work in diverse roles and areas within organizations. Each has a different participation level, education level requirements. The following chart highlights the top 10 tech occupations in Minnesota ranked by current employment along with compensation levels and the number of projected job openings needing to be filled over the next ten years.

OCCUPATION	2023 JOBS	WAGE RANGE 25TH-75th PERCENTILE	ESTIMATED 2033 JOBS	TOTAL ESTIMATED DEMAND THROUGH 2033 (GROWTH + REPLACEMENT)
Software Developers	38,136	\$95K - \$136k	43,189	32,086
Computer Systems Analysts	13,661	\$83k - \$127k	13,998	10,079
Computer User Support Specialists	13,233	\$49k - \$75k	13,560	10,713
Computer and Information Systems Mgrs	9,238	\$126k - \$174k	10,114	7,989
Network Support Specialists	6,687	\$59k - \$86k	6,791	5,315
Network and Computer Systems Administrators	4,589	\$77k - \$109k	4,690	3,234
Computer, Automated Teller, & Office Machine Repairers	3,031	\$34k - \$50k	2,782	2,880
Information Security Analysts	2,793	\$88k - \$135k	3,385	2,831
Computer Network Architects	2,711	\$101k - \$139k	2,738	1,728
Web Developers	2,570	\$62k - \$109k	2,837	2,283
	TOTAL 2023 JOBS	MEDIAN TECH WAGE	ESTIMATED 2033 JOBS	TOTAL ESTIMATED DEMAND THROUGH 2033 (GROWTH + REPLACEMENT)
All Information Technology Employment in Minnesota	112,450	\$101,365	121,383	92,537

Roles in Demand



The average number of postings per month for a particular role can change significantly based on different factors. However, the mismatch between postings and hirings can demonstrate difficulty to hire for a specific role.

POSTINGS VS. HIRES BY TECH OCCUPATION

OCCUPATION	AVG MONTHLY POSTINGS	AVG MONTHLY HIRES	GAP
Software Developers	4364	1241	-3,123
Computer Occupations, All Other	2,462	178	-2,284
Computer User Support Specialists	1,533	505	-1,028
Computer Systems Analysts	1,258	405	-853
Web Developers	627	90	-537
Database Administrators	579	48	-531
Information Security Analysts	548	116	-432
Software Quality Assurance Analysts and Testers	528	92	-436

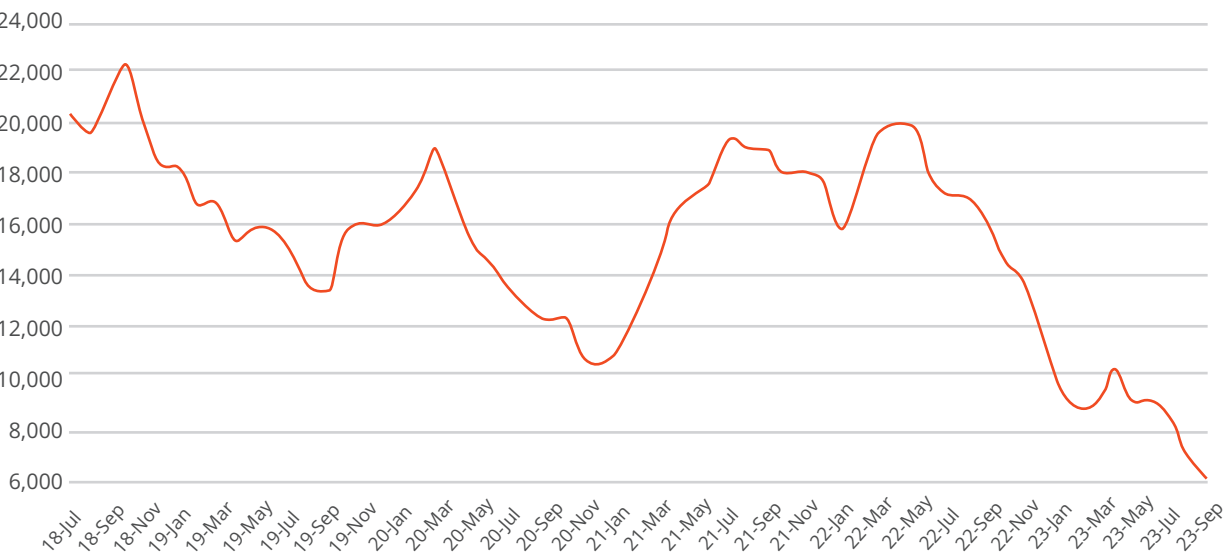
Current Hiring Trends

Technology job postings nationally have fallen dramatically in 2023. Roles that are posted showed evidence of employers gravitating towards more experienced candidates.. Simultaneously, some major employers continue to eliminate 4-year degree requirements for tech roles they are posting.



JOB POSTINGS 5-YEAR TREND

Technology job postings in Minnesota hit their lowest level in more than 10 years in September 2023. There were 6,213 unique roles posted, which is down 62% from September 2022.



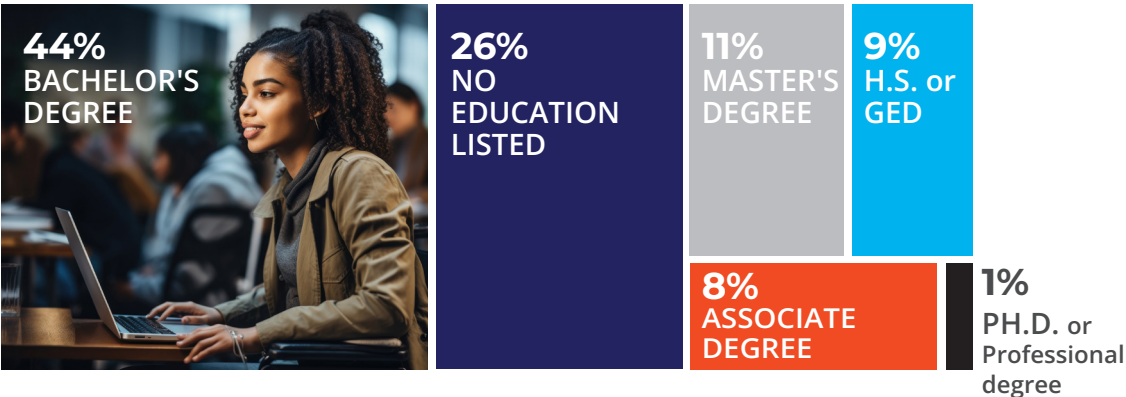
Minnesota Tech Cluster Unique Job Postings

Data as of 10-16-2023



JOB POSTINGS BY EDUCATIONAL ATTAINMENT

Minnesota employers continue to ease degree requirements for roles posted in 2023 in better alignment with national trends.

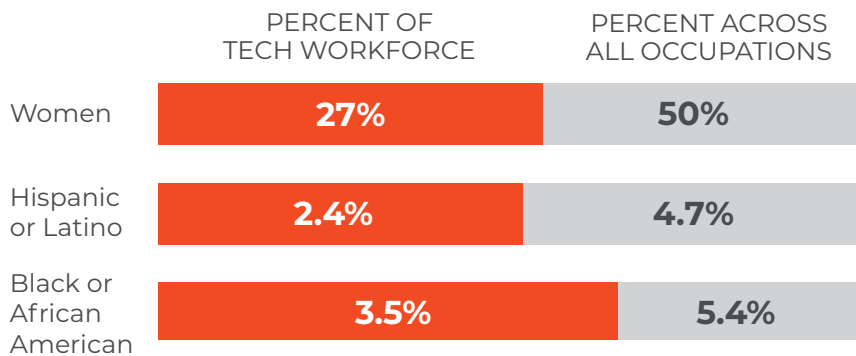


Minnesota Tech Cluster Job Postings

Diversity

Like other industry clusters, diversity remains a challenge within the tech sector. This is true from both a racial and gender perspective. Full inclusion will require all parts of the ecosystem to work together to inspire, hire, develop, and retain diverse technologists.

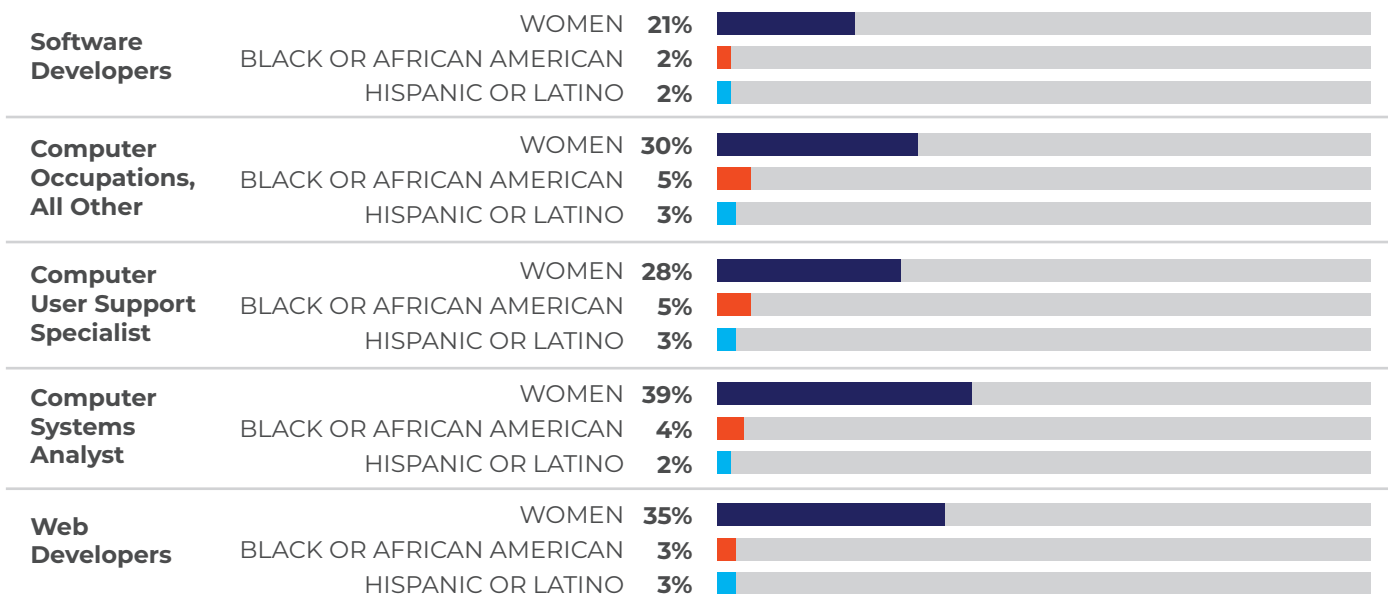
OVERALL MINNESOTA TECH SECTOR INCLUSION



If representation in tech fields mirrored representation across all occupations, the additional 23% of women, 2.3% of Hispanic/Latino, and 1.9% of Black or African Americans would result in an additional

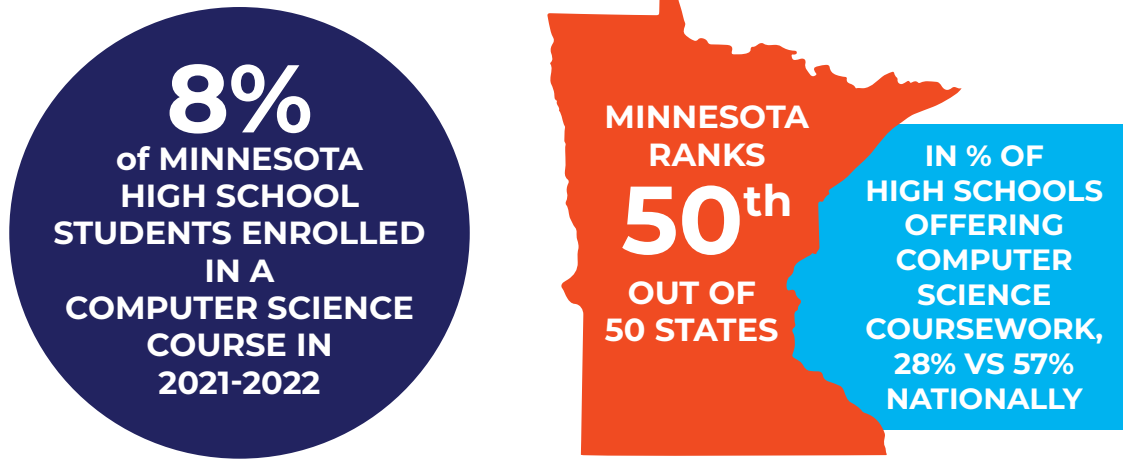
28,000 TECHNOLOGISTS

GENDER AND RACIAL REPRESENTATION FOR HIGH DEMAND ROLES

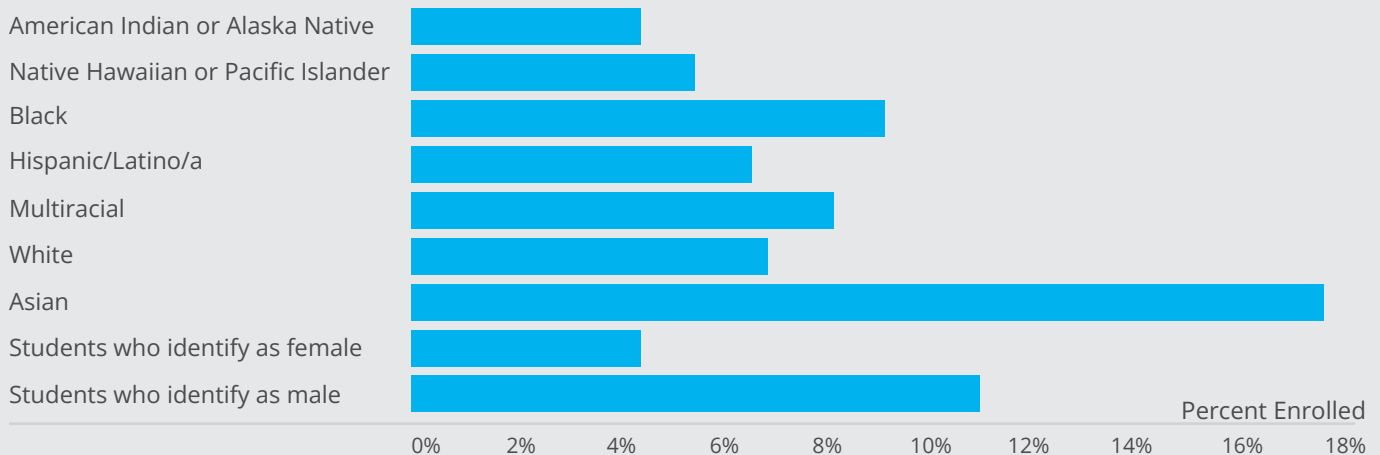


K-12 Education

Minnesota employers will not be able to remain competitive in the future without a strong tech talent pipeline. According to Code.org, Minnesota continues to rank last in the country in computer science offerings at public high schools. Our state must continue to make progress in terms of policy, inclusion, and enablement in education.

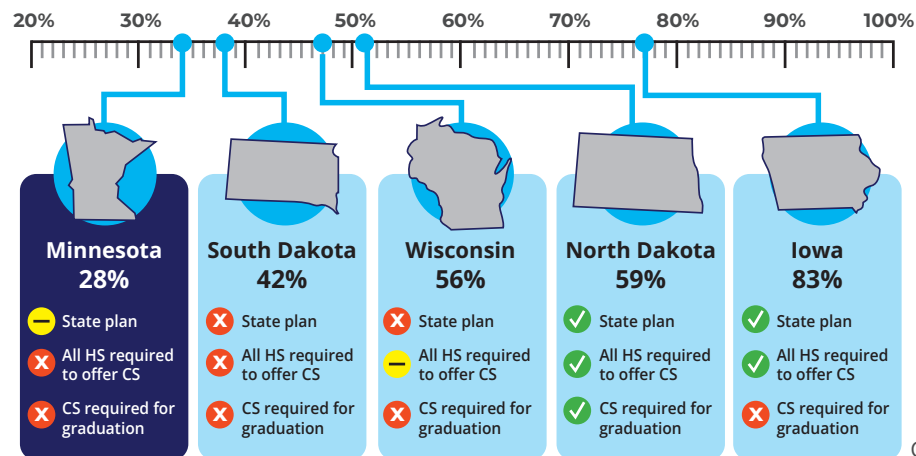


ENROLLMENT BY RACE/ETHNICITY, AND GENDER



COMPARATIVE ACCESS TO COMPUTER SCIENCE COURSES

(Percentage of high schools offering)



Minnesota passed its first ever computer science legislation in 2023. Work has begun on a statewide plan to get Minnesota out of last place.

REFERENCES

2023 State of Computer Science Education. Code.org

CompTIA Jobs Report. October 2023. <https://www.comptia.org/content/tech-jobs-report>

ECEP Common Metrics Data Dashboard: Preliminary Results. Warner, J. R., McCann, C. (2023). Expanding Computing Education Pathways (ECEP). <https://tabsoft.co/45ENnzq>.

eIMPACT Minnesota Tech Workforce. eIMPACT.

Finding a Tech Job Is Still a Nightmare. Hoover, Amanda: Wired. https://www.wired.com/story/tech-jobs-layoffs-hiring/?utm_source=pocket-new-tab-en-us

Lightcast | US Bureau of Labor Statistics | CompTIA, October 2023.

State of Tech Workforce. Cyberstates 2023.

The Economic Status of Minnesotans 2023. Minnesota State Demographic Center Department of Administration.

The Emerging Degree Reset. The Burning Glass Institute. <https://www.burningglassinstitute.org/research/the-emerging-degree-reset>



mntech.org

