

OPENING SESSION

# The State of our State's Tech Talent

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# MnTech Will Use National Best Practices to Build a More Inclusive Tech Talent Pipeline

**TPM** TALENT PIPELINE  
MANAGEMENT

★ ★ ★ ★  
**CHICAGO APPRENTICE NETWORK**

## The Emerging Degree Reset

How the Shift to Skills-Based Hiring Holds  
the Keys to Growing the U.S. Workforce  
at a Time of Talent Shortage

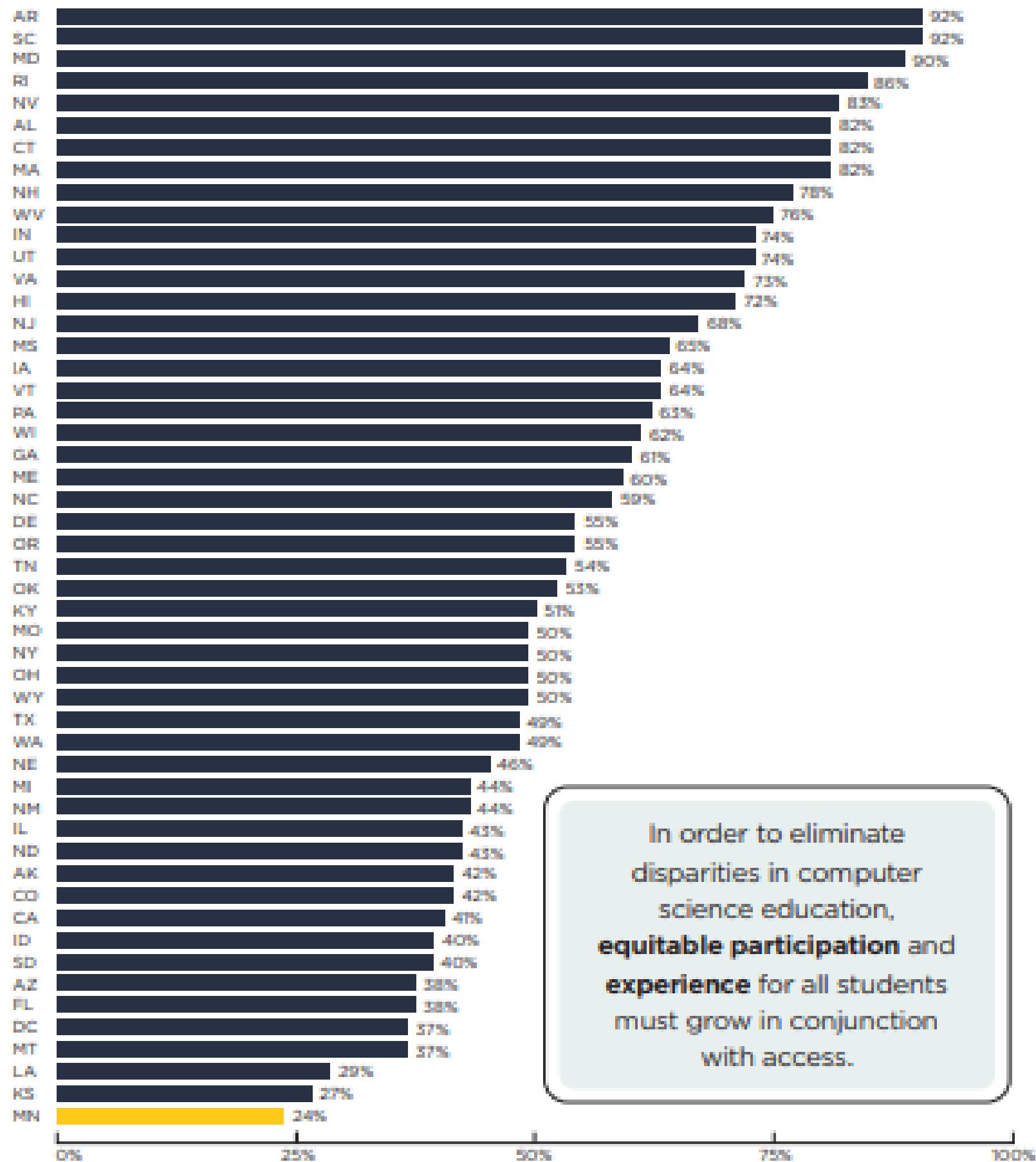
**APPRENTI.**  
Paving the path for talent in tech.

**CsforALL**

**CTA**  
Apprenticeship  
Coalition

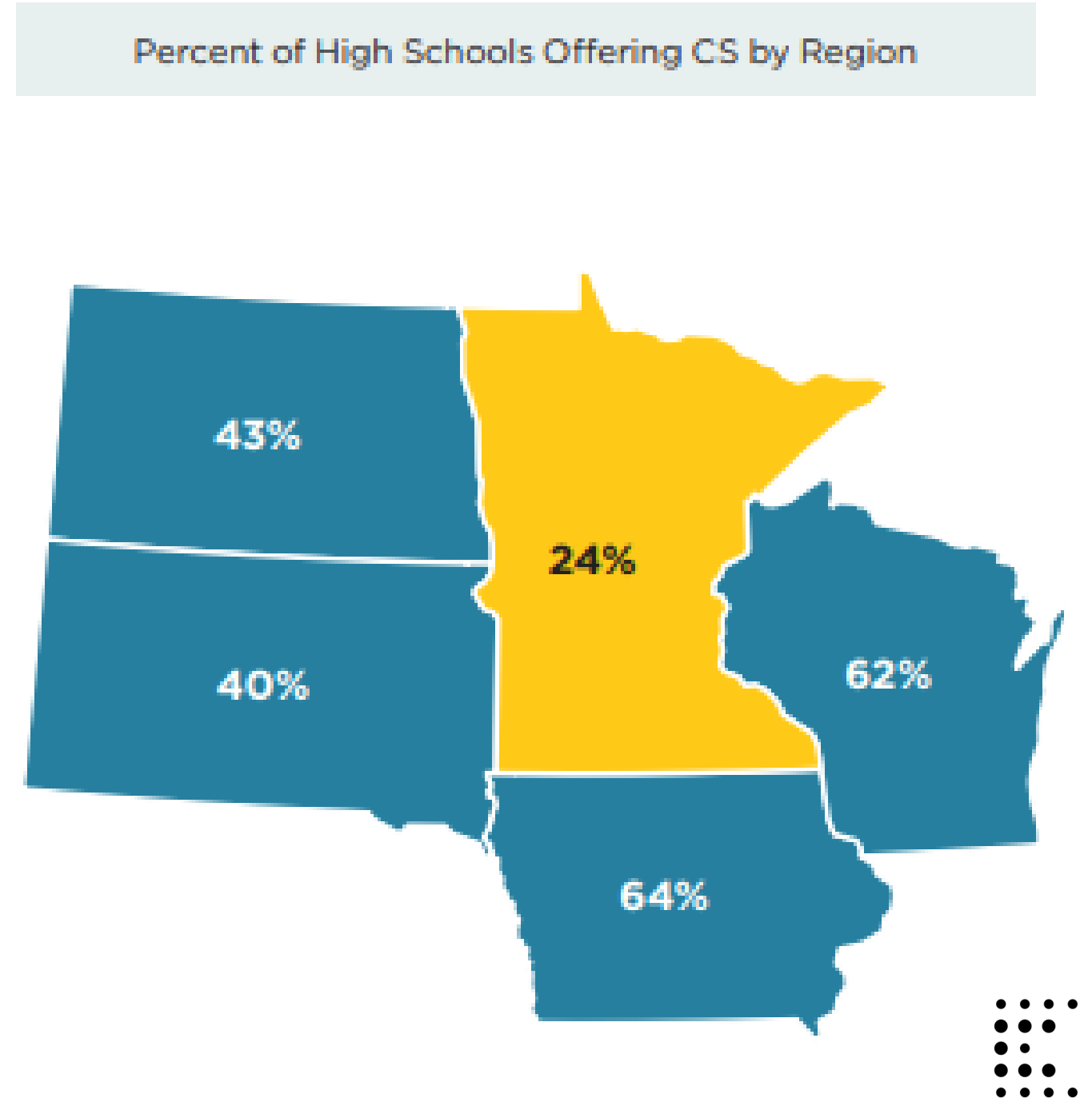


# High Schools Offering Computer Science by State



In order to eliminate disparities in computer science education, **equitable participation** and **experience** for all students must grow in conjunction with access.

# Minnesota Lags the Nation in Access to Computer Science

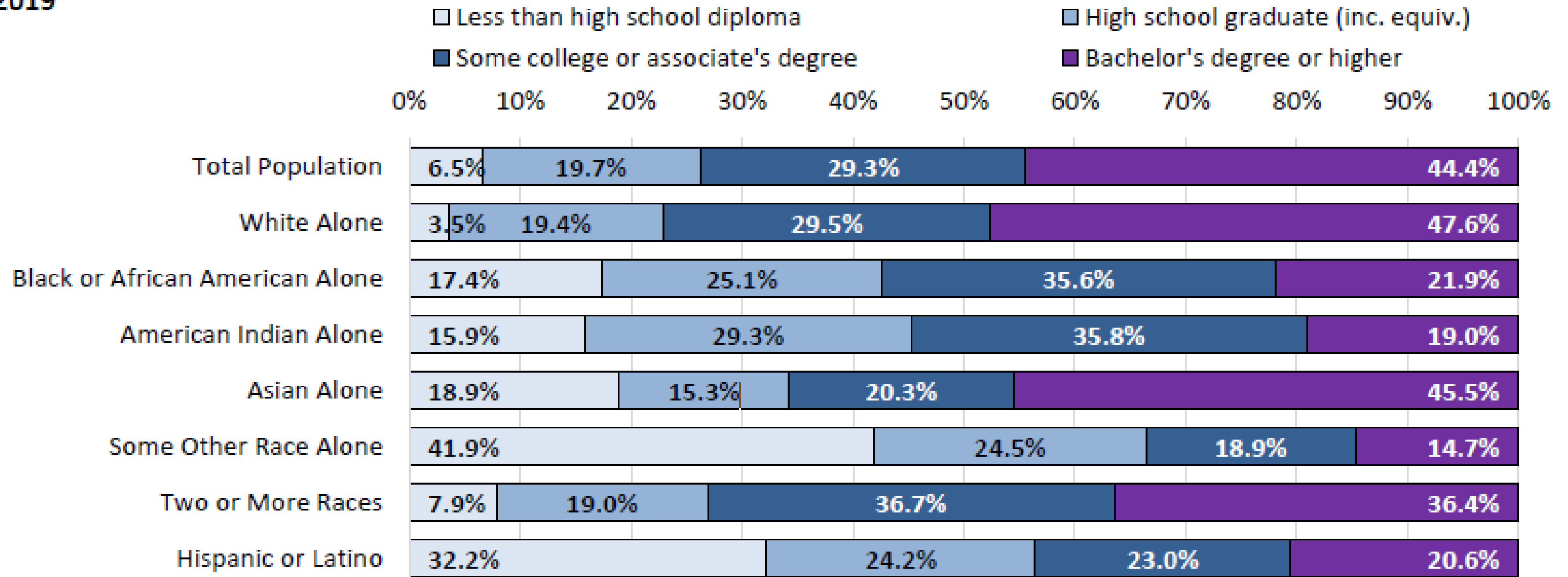


# Minnesota In-Demand IT Occupations

SOC Title	25th Percentile Wage	Median Wage	MN Projected Growth Rate	MN Projected Openings	Education Requirements	On-the-job Training Requirements
Software Developers and Software Quality Assurance Analysts and Testers	\$86,480/yr	\$108,141/yr	23.20%	34,536	Bachelor's degree	Unavailable
Computer Systems Analysts	\$77,144/yr	\$98,295/yr	5.60%	14,372	Bachelor's degree	Short term on the job training
Computer User Support Specialists	\$45,831/yr	\$56,871/yr	5.30%	9,836	Postsecondary non-degree award	Short term on the job training
Network and Computer Systems Administrators	\$72,043/yr	\$88,520/yr	3.10%	4,367	Bachelor's degree	Long term on the job training
Web Developers and Digital Interface Designers	\$60,085/yr	\$78,726/yr	7.90%	3,568	Associate's degree	Unavailable
Information Security Analysts	\$81,623/yr	\$102,376/yr	29%	2,784	Bachelor's degree	Short term on the job training

# Educational Attainment for the Twin Cities Metro Area

**Figure 5. Educational Attainment for the population aged 25 years & over by Race or Origin, 2019**



Source: 2015-2019 American Community Survey

# Employer Validated Occupational Profiles

## Information Security Analyst

**Salary Range:** 25<sup>th</sup> Percentile: 81,623/yr | Median: \$102,376/yr | Hourly (MSP Metro): \$39.74 - \$61.70

### Position Description

Plan, implement, upgrade, or monitor security measures for the protection of computer networks and information. Assess system vulnerabilities for security risks and propose and implement risk mitigation strategies. May ensure appropriate security controls are in place that will safeguard digital files and vital electronic infrastructure. May respond to computer security breaches and viruses.

### Daily Work Activities:

- Develop computer or information security policies or procedures.
- Update knowledge about emerging industry or technology trends.
- Implement security measures for computer or information systems.
- Test computer system operations to ensure proper functioning.
- Troubleshoot issues with computer applications or systems.

### Core Functional/Technical Skills

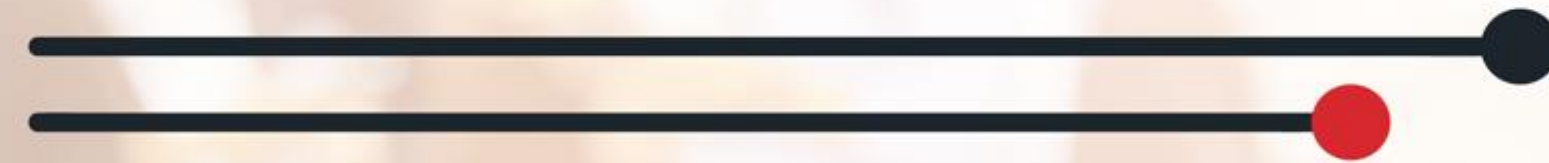
Analytical Skills	Risk Assessment
Firewall	Security Data Analytics
Intrusion Prevention Systems	Security Framework Management
Networking	Security Policy
Operating Systems	Access & Authentication
Penetration Testing	DevSecOps
SIEM Management	Fraud Analytics
Vulnerability Management	Mobile Security
Cybersecurity	Requirements Gathering & Management
Incident Management	Stakeholder Management
Information Security	Data Protection & Privacy Impact Assessment
Regulatory Compliance Reporting	

### Responsibilities

- Research/evaluate emerging cyber security threats and ways to manage them
- Plan for disaster recovery and create contingency plans in the event of any security breaches
- Monitor for attacks, intrusions and unusual, unauthorized or illegal activity
- Test and evaluate security products
- Design new security systems or upgrade existing ones
- Use advanced analytic tools to determine emerging threat patterns and vulnerabilities
- engage in 'ethical hacking', for example, simulating security breaches
- Identify potential weaknesses and implement measures, such as firewalls and encryption
- Monitor identity and access management, including monitoring for abuse of permissions by authorized system users
- Liaise with stakeholders in relation to cyber security issues and provide future recommendations

Also known as: Cyber Security Analyst, Information Security Officer, Information Security Specialist, Information Systems Security Analyst, Information Systems Security Officer (ISSO), Information Technology Security Analyst (IT Security Analyst), Information Technology Specialist, Network Security Analyst, Security Analyst, Systems Analyst

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# Questions or Want to Get Involved?



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