



MSP Sector Analysis

Information Technology

Living Wage Middle Skill Jobs

Continuing Growth, Expanding Opportunities

Information Technology continues to be a growing and high-wage sector of great importance to the finance, healthcare, and high tech industries. About 80,296 people are currently employed in Information Technology roles, with 7% of these found in state or local government. Employers continue to seek candidates with credentials; 98% of online job postings advertised during the second quarter of 2017 required a certificate or some college education. Employment is expected to grow by 1.1% annually through 2020.

Top Occupations in Demand in the 7-County Metro

IT Occupations	Jobs Available Q2 2017	Change from Prior Year	Share Requiring an AA or Less
Software Developers, Applications	7,312	+21%	2%
Computer Systems Analysts	6,368	+5%	2%
Computer User Support Specialists	4,718	+9%	61%
IT Project Managers	4,448	-2%	2%
Web Developers	4,092	+14%	55%
Network & Computer Systems Admins	3,305	-3%	8%
Software QA Engineers/Testers	2,498	+8%	4%
Computer Systems Engineers & Architects	2,489	+11%	2%
Computer & Info Systems Managers	1,814	+7%	1%
Computer Programmers	1,701	-5%	3%
Information Security Analysts	1,449	-18%	3%
Database Administrators	952	-13%	2%
Software Developers, Systems Software	594	+10%	3%
Computer Network Architects	309	-17%	7%
Search Marketing Strategists	90	+91%	12%
Computer Operators	69	-32%	93%
Computer Network Support Specialists	34	-29%	71%
GIS Technicians	33	-25%	8%
Web Administrators	17	+325%	25%
Document Management Specialists	16	+433%	25%
Database Architects	9	-25%	0%
Telecommunications Engineering Specialists	5	+400%	0%
Data Warehousing Specialists	5	+150%	0%
Geospatial Information Scientists & Technologists	1	-83%	0%
Total	42,328	+6%	14%

Jobs Requiring an Associate Degree or Less

More detail found on the next page.

Computer User Support Specialists ☀

4,718 job ads (+9%) **\$17.44 avg. entry-level wage**

2017 Employment: 9,623 2020 Employment: 9,926
Typical Entry-Level Position: Some College or Certificate

HIGH EMPLOYMENT
SUSTAINED GROWTH
LARGE GRAD NEED
BASE NEED MET

Web Developers ☀

4,092 job ads (+14%) **\$20.04 avg. entry-level wage**

2017 Employment: 2,728 2020 Employment: 2,914
55% Job Ads AA or Less 32% Existing Employees AA or Less

HIGH WAGE
HIGH GROWTH
SMALL GRAD NEED
BASE NEED NOT MET

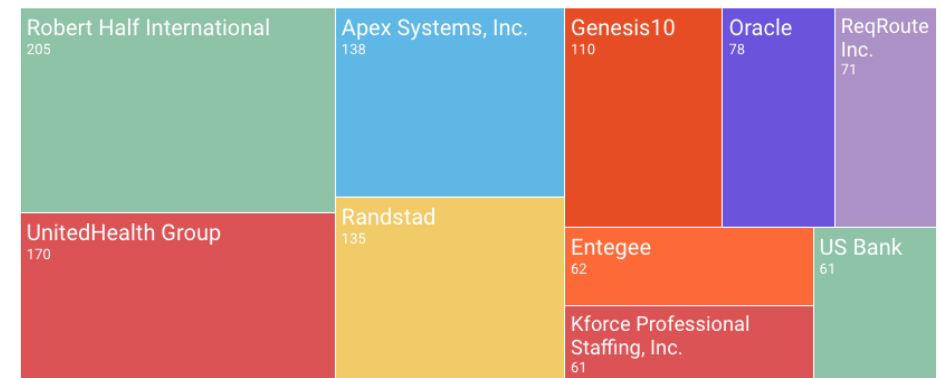
Computer Network Support Specialists

34 job ads (-29%) **\$20.90 avg. entry-level wage**

2017 Employment: 2,719 2020 Employment: 2,761
71% Job Ads AA or Less 57% Existing Employees AA or Less

HIGH WAGE
MODERATE GROWTH
SMALL GRAD NEED
EXCEEDS BASE NEED

Top Employers Recruiting Candidates with an Associate Degree or Less



Computer Operator was identified as another common low-education Information Technology occupation, but based on low and declining employer demand and low award completion rates (2 in 2016), this occupation was excluded.

Top Living Wage Occupations in Demand with an Associate Degree or Less

Computer User Support Specialists ☀️

4,718 job ads (+9%) **\$17.44 avg. entry-level wage**

Typical Entry-Level Position: Some College or Certificate

	2017	2020
Employment	9,623	9,926
Annual Growth Rate	1.7%	1%
Total 3-Year Demand	463	671
Unemployment/Worker Surplus	274 (3%)	0

MAINTAIN GRADUATE OUTPUT

Regional Certificate & 2-Year Programs

Computer Support Specialist, Computer Programming - Specific Applications, Medical Office Computer Specialist

School	2016 Completions	People of Color
Hennepin TC	30	33%
Minneapolis CTC	15	29%
Normandale CC	11	64%
National American U	9	20%
American Indian OIC	8	60%
North Hennepin CC	8	25%
Anoka-Ramsey CC	4	25%
Inver Hills CC	4	25%
Dakota County TC	3	0%
MN School of Business	2	0%
Century College	1	100%
Saint Paul College	1	0%
All Related Programs	93	38%
Graduate Shortfall*	66	
Training Concentration	0.82	Mod Low

Web Developers ☀️

4,092 job ads (+14%) **\$20.04 avg. entry-level wage**

Typical Entry-Level Position: Associate Degree

	2017	2020
Employment	2,728	2,914
Annual Growth Rate	1.6%	2.2%
Total 3-Year Demand	128	320
Unemployment/Shortfall	75 (2.8%)	96

INCREASE GRADUATE OUTPUT BY 32/YEAR

Regional Certificate & 2-Year Programs

Computer Science, General Computer Programming, Web Page/Digital/Multimedia Information Resources Design

School	2016 Completions	People of Color
North Hennepin CC	86	38%
Minneapolis CTC	66	27%
Concordia University	38	18%
Normandale CC	29	35%
Saint Paul College	22	45%
Dunwoody College of Tech	21	19%
Anoka-Ramsey CC	17	24%
Century College	14	14%
Dakota County TC	13	25%
Inver Hills CC	3	33%
The Art Institutes Intl.	2	50%
Hennepin TC	1	100%
All Related Programs	318	30%
Graduate Shortfall*	29	
Training Concentration	0.84	Mod Low

Computer Network Support Specialists

34 job ads (-29%) **\$20.90 avg. entry-level wage**

Typical Entry-Level: Some College or Certificate, No Degree

	2017	2020
Employment	2,719	2,761
Annual Growth Rate	1.3%	0.5%
Total 3-Year Demand	105	149
Unemployment/Worker Surplus	80 (3.1%)	30

MAINTAIN/SLIGHTLY REDIRECT GRADUATE OUTPUT

Regional Certificate & 2-Year Programs

Computer & Information Systems Security, General Computer Programming, Computer Science, Computer Support Specialist, Computer Systems Networking & Telecommunications, Network & System Administration, System Networking and LAN/WAN Management

School	2016 Completions	People of Color
Hennepin TC	90	40%
North Hennepin CC	82	38%
Minneapolis CTC	74	24%
Anoka-Ramsey CC	68	22%
Century College	68	37%
Saint Paul College	43	56%
Concordia University	38	18%
Dunwoody College of Tech	35	26%
Dakota County TC	32	16%
Normandale CC	29	35%
All Related Programs (includes 8 others)	633	31%
Graduate Shortfall*	15	
Training Concentration	0.82	Mod Low

Entry-Level Credential Programs	Related Occupations	Training Partners	Annual Graduates
A+ & Network+ Certification	Computer User Support Specialist, Technical Support	Creating IT Futures Jewish Family & Children's Services	90 25
Industry Recognized coding in Full Stack Engineering & User Experience Design	Web Developer, Software Applications Developer, Computer Systems Engineer	PRIME Digital Academy	180
Industry Recognized coding in C#, .Net & Java	Web Developer, Software Developer, Software Quality Assurance Tester	The Software Guild	50

For more information:

- Industry Contact: **Tammy Dickinson, Career Pathways Coordinator** (612-673-5041 or tammy.dickinson@minneapolismn.gov)
- MSPWin Career Map: <http://mspwin.org/wp-content/uploads/2016/06/Career-Pathway-Maps.pdf>
- RealTime Talent Reports: realtimetalent.org/research/reports

*The additional number of educational completions needed to match completion rates for this occupation nationally. Developed by Erin Olson (erin@realtimetalentmn.org). Published 11/15/2017 by RealTime Talent. Sources: TalentNeuron Recruit aggregate online job postings. www.wantedanalytics.com accessed October 26, 2017. Counts of job postings in Q2 2017 by employer were available April 1 - June 30, 2017 in the 7-county Minneapolis-Saint Paul Metro. Includes staffing agencies. Percent change in job postings are the change from the same quarter in the prior year. Employment, wage, and education data modeled from IPEDS, OES, and BLS data by JobsEQ. 2016 completions include awards issued and are not counts of graduates. People of color color calculations do not include nonresident aliens (international students) for which race or ethnicity is not determined. Living wage was defined for the purposes of these reports as any occupation where the median wage is \$30,000 annually, or about \$14.50 per hour. Training Concentration (TC) quantifies how many completions were obtained in the Twin Cities compared to the nation. A TC of 1 indicates that the occupation award's share of the labor market is the same as the national average; a TC of 1.2 or higher shows a significant specialization in that occupation area.