Computer Tech Support Occupations
Labor Market Information Report
Hartnell College

Prepared by the San Francisco Bay Center of Excellence
for Labor Market Research
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Recommendation

Based on all available data, there appears to be an undersupply of Computer Tech Support workers compared to the demand for this cluster of occupations in the Bay region and in the SC-Monterey sub-region (Monterey, San Benito, and Santa Cruz Counties.) There is a projected annual gap of about 3,876 students in the Bay region and 74 students in the SC-Monterey Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0708.20 - Computer Support in the state and region. It is recommended that these data be reviewed to better understand how outcomes for students taking courses on this TOP code compare to potentially similar programs at colleges in the state and region, as well as to outcomes across all CTE programs at Hartnell College and in the region.

Introduction

This report profiles Computer Tech Support Occupations in the 12 county Bay region and in the SC-Monterey sub-region for a proposed new program at Hartnell College.

- **Computer User Support Specialists (SOC 15-1151): Provide technical assistance to** computer users. Answer questions or resolve computer problems for clients in person, or via telephone or electronically. May provide assistance concerning the use of computer hardware and software, including printing, installation, word processing, electronic mail, and operating systems. Excludes "Network and Computer Systems Administrators" (15-1142).
    Entry-Level Educational Requirement: Some college, *no degree*
    Training Requirement: None
    Percentage of Community College Award Holders or Some Postsecondary Coursework: 41%

- **Computer Network Support Specialists** (SOC 15-1152): Analyze, test, troubleshoot, and evaluate existing network systems, such as local area network (LAN), wide area network (WAN), and Internet systems or a segment of a network system. Perform network maintenance to ensure networks operate correctly with minimal interruption. Excludes "Network and Computer Systems Administrators" (15-1142) and "Computer Network Architects" (15-1143).
    Entry-Level Educational Requirement: Associate's *degree*
    Training Requirement: None
    Percentage of Community College Award Holders or Some Postsecondary Coursework: *41%*

Occupational Demand

Table 1. Employment Outlook for Computer Tech Support Occupations in Bay Region

Occupation	2018 Jobs	2023 Jobs	5-Yr Change	5-Yr % Change	5-Yr Open-ings	Average Annual Open-ings	25% Hourly Wage	Median Hourly Wage
Computer User Support Specialists	31,415	35,777	4,362	14%	16,313	3,263	$26.69	$34.77
Computer Network Support Specialists	6,558	7,464	905	14%	3,401	680	$29.28	$38.92
Total	**37,974**	**43,241**	**5,267**	**14%**	**19,714**	**3,943**	**$27.14**	**$35.49**

Source: EMSI 2019.3

Bay Region includes Alameda, Contra Costa, Marin, Monterey, Napa, San Benito, San Francisco, San Mateo, Santa Clara, Santa Cruz, Solano and Sonoma Counties

Table 2. Employment Outlook for Computer Tech Support Occupations in SC-Monterey Sub-Region

Occupation	2018 Jobs	2023 Jobs	5-Yr Change	5-Yr % Change	5-Yr Open-ings	Average Annual Open-ings	25% Hourly Wage	Median Hourly Wage
Computer User Support Specialists	769	824	55	7%	340	68	$21.39	$28.68
Computer Network Support Specialists	265	275	10	4%	108	22	$25.23	$30.09
TOTAL	**1,035**	**1,100**	**65**	**6%**	**449**	**90**	**$22.37**	**$29.04**

Source: EMSI 2019.3

SC-Monterey Sub-Region includes Monterey, San Benito, and Santa Cruz Counties

Job Postings in Bay Region and SC-Monterey Sub-Region

Table 3. Number of Job Postings by Occupation for latest 12 months (January 2019 - December 2019)

Occupation	Bay Region	SC-Monterey
Computer User Support Specialists	16,609	329
Computer Network Support Specialists	1,332	35
Total	**17,941**	**364**

Source: Burning Glass

Table 4a. Top Job Titles for Computer Tech Support Occupations for latest 12 months (January 2019 - December 2019) Bay Region

Common Title	Bay	Common Title	Bay
Desktop Support	1,130	Help Desk Specialist	203
Technical Support Engineer	919	Help Desk Support	201
Information Technology Support Specialist	588	Technical Support Analyst	200
Desktop Support Technician	564	Desktop Support Analyst	199
Information Technology Specialist	535	Desktop Support Specialist	190
Information Technology Technician	511	Customer Support Engineer	188
Technical Support Specialist	477	Geek Squad Agent	187
Help Desk Technician	454	Computer Technician	165
Field Service Technician	301	Help Desk Analyst	154
Information Technology Support Technician	284	Applications Engineer	147
Lead Technician	252	Help Desk	141

Customer Engineer	239	Sap	123
PC Technician	224	Technical Support Representative	120
Desktop Technician	206	Sap Abap	120

Table 4b. Top Job Titles for Computer Tech Support Occupations for latest 12 months (January 2019 - December 2019) SC-Monterey Sub-Region

Common Title	SC-Monterey	Common Title	SC-Monterey
Information Technology Specialist	70	Technical Support Analyst	5
Help Desk Technician	21	Rehabilitation Support Technician/Hunter, Information And Technology Industry	5
Information Technology Technician	18	Technology Specialist	4
Geek Squad Agent	17	Systems Administrator	4
Information Technology Support Technician	12	PC Technician	4
Help Desk	12	Information Technology Support Specialist	4
Desktop Support	11	Help Desk Support	4
Technical Support Specialist	9	Technical Support Manager	3
Service Technician	9	Technical Support Engineer	3
Network Technician	8	Specialist	3
Desktop Support Technician	8	Lead Technician	3
Help Desk Specialist	7	It Support	3
Computer Technician	7	It Helpdesk	3
Network Specialist	6	Computer Repair Technician	3

Source: Burning Glass

Industry Concentration

Table 5. Industries hiring Computer Tech Support Workers in Bay Region

Industry – 6 Digit NAICS (No. American Industry Classification) Codes	Jobs in Industry (2018)	Jobs in Industry (2022)	% Change (2018-22)	% in Industry (2018)
Custom Computer Programming Services (541511)	7,046	8,291	18%	19%
Computer Systems Design Services (541512)	4,263	4,819	13%	11%
Software Publishers (511210)	2,689	3,469	29%	7%
Internet Publishing and Broadcasting and Web Search Portals (519130)	2,261	2,998	33%	6%
Electronic Computer Manufacturing (334111)	2,007	2,197	9%	5%
Data Processing, Hosting, and Related Services (518210)	1,863	2,542	36%	5%
Colleges, Universities, and Professional Schools (State Government) (902612)	1,515	1,702	12%	4%
Colleges, Universities, and Professional Schools (611310)	1,246	1,380	11%	3%
Corporate, Subsidiary, and Regional Managing Offices (551114)	1,149	1,241	8%	3%
Other Computer Related Services (541519)	987	1,200	22%	3%
Local Government, Excluding Education and Hospitals (903999)	703	737	5%	2%
Temporary Help Services (561320)	647	689	6%	2%
Elementary and Secondary Schools (Local Government) (903611)	593	621	5%	2%
Colleges, Universities, and Professional Schools (Local Government) (903612)	612	533	-13%	2%

Computer and Computer Peripheral Equipment and Software Merchant Wholesalers (423430)	532	431	-19%	1%
Wired Telecommunications Carriers (517311)	420	390	-7%	1%

Source: EMSI 2019.3

Table 6. Top Employers Posting Computer Tech Support Occupations in Bay Region and SC-Monterey Sub-Region (January 2019 - December 2019)

Employer	Bay	Employer	Bay	Employer	SC-Monterey
Best Buy	223	NCR Corporation	36	Best Buy	21
Milestone Technologies Inc	185	Astreya Partners	35	US Government	18
Milestone Technologies	88	KLA-Tencor	33	US Navy	10
Wells Fargo	85	Samsung America, Inc.	30	Reynolds & Reynolds	8
Cisco Systems Inc	67	Apple Inc.	30	US Department of Defense	7
Excell	66	Twilio	29	University California	6
Wipro	60	Deloitte	29	US Army	6
SAP	56	NTT Data	27	Northrop Grumman	5
IBM	56	Intelliswift Software	27	Languageline Solutions	5
Facebook	49	Getronics	27	Colorado State University	4
Anthem Blue Cross	49	Ascent	27	UC Santa Cruz	3
Google Inc.	46	Salesforce	25	United States Fleet Forces Command	3
Accenture	45	Fortinet Incorporated	25	Service Station Computer Systems	3
US Government	44	Codeforce 360	24	Nutranext	3
Astreya	42	Citrix	24	Maynard Group	3
Microsoft Corporation	37	Applied Materials	24	Looker Group	3
US Army	36	SAIC	23	California State University	3

Source: Burning Glass

Educational Supply

There are seven (7) community colleges in the Bay Region issuing 67 awards on average annually (last 3 years) on TOP 0708.20 - Computer Support. There are two colleges in the SC-Monterey Sub-Region issuing 16 awards on average annually (last 3 years) on this TOP code.

Table 7. Awards on TOP 0708.20 - Computer Support in Bay Region

College	Sub-Region	Associates	Certificate 18+ units	Certificate Low unit	Total
Cabrillo College	Santa Cruz-Monterey	4	3	6	13
City College of San Francisco	Mid-Peninsula		10	15	25
Contra Costa College	East Bay		0	4	4
Diablo Valley College	East Bay	6	3	2	11
Hartnell College	Santa Cruz-Monterey	2	1		3
Ohlone College	East Bay	2	-	1	3
Santa Rosa Junior College	North Bay			8	8
Total Bay Region		**14**	**17**	**36**	**67**
Total SC-Monterey Sub-Region		**6**	**4**	**6**	**16**

Source: Data Mart

Note: The annual average for awards is 2015-16 to 2017-18.

Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 3,943 annual openings for the Computer Tech Support occupational cluster and 67 annual (3-year average) awards for an annual undersupply of 3,876 students. In the SC-Monterey Sub-Region, there is also a gap with 90 annual openings and 16 annual (3-year average) awards for an annual undersupply of 74 students.

Student Outcomes

Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0708.20 - Computer Support

2015-16	Bay (All CTE Programs)	Hartnell College (All CTE Programs)	State (0708.20)	Bay (0708.20)	SC-Monterey (0708.20)	Hartnell College (0708.20)
% Employed Four Quarters After Exit	74%	81%	70%	70%	n/a	n/a
Median Quarterly Earnings Two Quarters After Exit	$10,550	$19,867	$7,689	$9,858	n/a	n/a
Median % Change in Earnings	46%	23%	57%	81%	n/a	n/a
% of Students Earning a Living Wage	63%	77%	53%	63%	n/a	n/a

Source: Launchboard Pipeline (version available on 1/3/20)

Skills, Certifications and Education

Table 9. Top Skills for Computer Tech Support Occupations in Bay Region (January 2019 - December 2019)

Skill	Postings	Skill	Postings	Skill	Postings
Technical Support	8,207	Hardware Troubleshooting	1,605	Scheduling	962
Customer Service	5,506	Computer Installation and Setup	1,421	Break/Fix	958
Repair	3,277	Software Installation	1,409	System Administration	954
Microsoft Active Directory	2,725	Hardware and Software Configuration	1,326	Oracle	939
Help Desk Support	2,662	Transmission Control Protocol / Internet Protocol (TCP / IP)	1,325	Video Conferencing	930
Printers	2,629	Virtual Private Networking (VPN)	1,272	Hardware Experience	926
It Support	2,619	Cisco	1,263	System/Network Configuration	919
Hardware and Software Installation	2,337	Network Troubleshooting	1,209	Telecommunications	908
Linux	1,899	Project Management	1,178	Application Support	905
Microsoft Operating Systems	1,863	Domain Name System (DNS)	1,135	Network Hardware/Software Maintenance	895
Customer Contact	1,824	Wide Area Network (WAN)	1,070	Salesforce	886
SAP	1,657	Java	1,065	Dynamic Host Configuration Protocol (DHCP)	882
Troubleshooting Technical Issues	1,652	Python	1,033	ITIL	878

MacIntosh OS	1,626	Computer Hardware/Software Knowledge	1,018	Business Process	855
SQL	1,626	Service Level Agreement	1,005	Information Systems	854

Source: Burning Glass

Table 10. Certifications for Computer Tech Support Occupations in Bay Region (January 2019 - December 2019)

Note: 77% of records have been excluded because they do not include a certification. As a result, the chart below may not be representative of the full sample.

Certification	Postings	Certification	Postings
Certified A+ Technician	1,225	Microsoft Certified Desktop Support Technician (Legacy)	131
Driver's License	1,076	Cisco Certified Internetwork Expert (CCIE)	104
IT Infrastructure Library (ITIL) Certification	930	Apple Certified Macintosh Technician	104
CompTIA Network+	469	ITIL Foundation	96
Microsoft Certified Professional (MCP)	379	Project Management Certification	86
Cisco Certified Network Associate (CCNA)	366	Certified Information Systems Security Professional (CISSP)	67
ITIL Certification	362	Computer Science Certification	61
Microsoft Certified Solutions Associate (MCSA)	271	Microsoft Certified Technology Specialist (MCTS)	49
Security Clearance	238	CompTIA Server+	42
Microsoft Certified Solutions Expert (MCSE)	208	Information Technology Certification	40
CompTIA Security+	208	HDI Desktop Support Technician (DST)	40
Cisco Certified Network Professional (CCNP)	152	Microsoft Certified Systems Engineer (Legacy)	39

Source: Burning Glass

Table 11. Education Requirements for Computer Tech Support Occupations in Bay Region

Note: 55% of records have been excluded because they do not include a degree level. As a result, the chart below may not be representative of the full sample.

Education (minimum advertised)	Latest 12 Mos. Postings	Percent 12 Mos. Postings
High school or vocational training	1,659	21%
Associate Degree	1,115	14%
Bachelor's Degree or Higher	4,955	65%

Source: Burning Glass

Methodology

Occupations for this report were identified by use of skills listed in O*Net descriptions and job descriptions in Burning Glass. Labor demand data is sourced from Economic Modeling Specialists International (EMSI) occupation data and Burning Glass job postings data. Educational supply and student outcomes data is retrieved from multiple sources, including CTE Launchboard and CCCCO Data Mart.

Sources

O*Net Online
Labor Insight/Jobs (Burning Glass)
Economic Modeling Specialists International (EMSI)

CTE LaunchBoard www.calpassplus.org/Launchboard/
Statewide CTE Outcomes Survey
Employment Development Department Unemployment Insurance Dataset
Living Insight Center for Community Economic Development
Chancellor's Office MIS system

Contacts

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