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Computer Support Technician

Inland Empire/Desert Region (Riverside-San Bernardino-Ontario Metropolitan Statistical Area)

Summary

- Employment for computer support technician occupational group is expected to **increase by 9%** through 2022, more than **3,780 job openings** will be available over the five-year timeframe.

- The entry-level, 10th percentile hourly wage for each of the occupations, except for computer, automated teller, and office machine repairers, in the occupational group **exceeds the MIT Living Wage estimate of $12.10 per hour** for a single adult living in the Inland Empire/Desert Region.

- Based on the average annual number of program completions for the selected TOP code (**1 community college award, 19 other educational institutions awards, 20 total annual average awards**), and the annual openings for computer support technician occupations in the local region (**757 job openings**), there appears to be an opportunity for program growth.

Job Opportunities

In 2017, there was nearly 8,000 computer support technician occupational group jobs in the Inland Empire/Desert Region. Across the local region, employment related to this occupational group is expected to increase 9% through 2022. Employers in the Inland Empire/Desert Region will need to hire more than 3,800 workers over the next five years to fill new jobs and to backfill jobs that workers are leaving (includes retirements), nearly 760 annual job openings. Appendix A, Table 1 shows the projected job growth for each of the occupations in this group.

Exhibit 1: Five-year projections for the computer support technician occupational group in the Inland Empire/Desert Region

Region	2017 Jobs	5-Yr % Change (New Jobs)	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)	% of workers age 55+
Inland Empire/Desert Region	7,993	9%	3,783	757	17%

Source: EMSI 2017.4

Over the last 12 months (Jan 2017 to December 2017), there were 1,358 advertisements (ads) for jobs in the computer support technician occupational group in the Inland Empire/Desert Region. In the full-year 2016 there were 1,500 job ads; 1,699 job ads in 2015; 1,319 job ads in 2014; and 1,016 job ads in 2013. Exhibit 2 shows the number of job ads posted during the last 12 months for each of the occupations in this group.

Exhibit 2: Job ads by each of the computer support technician occupational group in the Inland Empire/Desert Region during the last 12 months, Jan 2017 – Dec 2017

Occupation	Job Ads
Computer User Support Specialists	817
Computer Systems Analysts	482
Computer Network Support Specialists	46
Computer, Automated Teller, and Office Machine Repairers	13
TOTAL	**1,358**

Source: Burning Glass – Labor Insights

Earnings

The entry-level wage for each occupation, except computer, automated teller, and office machine repairers, is above the MIT Living Wage estimate of $12.10 per hour for a single adult living in the Inland Empire/Desert Region. See Exhibit 3 for wage information by occupation for the Inland Empire/Desert Region.

Exhibit 3: Earnings for computer support technician occupations in the Inland Empire/Desert Region

Occupation	Entry to Experienced Hourly Earnings Range*	Median Wage*	Avg. Annual Earnings
Computer Systems Analysts	$25.65 to $50.42	$36.63	$77,500
Computer Network Support Specialist	$20.10 to $53.87	$30.62	$70,900
Computer User Support Specialists	$15.51 to $36.31	$24.62	$52,000
Computer, Automated Teller, and Office Machine Repairers	$11.89 to $21.33	$16.60	$34,800

Source: EMSI 2017.4

*Entry Hourly is 10th percentile wage, the median is 50th percentile wage, experienced is 90th percentile wage.

Work Locations, Skills, Education & Certifications

According to job ads in 2017, the top worksite regional cities for jobs in this occupational group were Ontario, Riverside, San Bernardino, Corona, and Rancho Cucamonga. The top employers posting job ads were Best Buy, San Manuel Indian Bingo & Casino, Obsidian Solutions Group, and Niagara Bottling Llc. Exhibit 4 lists the top specialized, soft, and software and programming skills that employers are seeking when looking for workers to fill these positions.

Exhibit 4: Top skills in greatest demand for the computer support technician occupational group in the Inland Empire/Desert Region, Jan 2017-Dec 2017

Occupation	Specialized skills	Soft skills	Software and Programming skills
Computer User Support Specialists (n=733)	• Technical Support • Customer Service • Repair	• Troubleshooting • Communication Skills • Writing	• Microsoft Office • Microsoft Windows • LINUX
Computer Systems Analysts (n=427)	• Systems Analysis • Project Management • Technical Support	• Communication Skills • Troubleshooting • Writing	• SQL • Microsoft Excel • Microsoft Office

Occupation	Specialized skills	Soft skills	Software and Programming skills
Computer Network Support Specialists *(n=43)*	• Technical Support • Information Systems • Project Management	• Planning • Research • Communication Skills	• UNIX • Cisco Routers • Microsoft Office
Computer, Automated Teller, and Office Machine Repairers *(n=9)*	• Repair • Device Monitoring • Data Entry	• Physical Demand • English • Communication Skills	• Microsoft Excel • Microsoft Office • Microsoft Powerpoint

Source: Burning Glass – Labor Insights

Exhibit 5 displays the entry-level education level education typically required to enter each occupation according to the Bureau of Labor Statistics, educational attainment for incumbent workers with "some college, no degree" and an "associate degree" according to the U.S. Census, and the minimum advertised education requirement requested by employers in online job ads.

Exhibit 5: Educational attainment and online job ads with minimum advertised education requirements for computer support technician occupations in the Inland Empire/Desert Region, Jan 2017-Dec 2017

Occupations	Typical Entry-Level Education Requirement	Educational Attainment (Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework)	Minimum Advertised Education Requirement from Job Ads		
			High school diploma or vocational training	Associate degree	Bachelor's degree or higher
Computer User Support Specialists *(n=377)*	Some college, no degree	43%	63%	13%	24%
Computer Systems Analysts *(n=355)*	Bachelor's degree	22%	19%	8%	73%
Computer Network Support Specialists *(n=35)*	Associate degree	43%	29%	34%	37%

Occupations	Typical Entry-Level Education Requirement	Educational Attainment (Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework)	Minimum Advertised Education Requirement from Job Ads		
			High school diploma or vocational training	Associate degree	Bachelor's degree or higher
Computer, Automated Teller, and Office Machine Repairers *(n=6)*	Some college, no degree	52%	50%	50%	-

Source: EMSI 2017.4, Current Population Survey, Burning Glass – Labor Insights

Exhibit 6 displays the top certifications requested or required by employers in job postings over the last 12 months.

Exhibit 6: Top certifications in greatest demand for computer support technicians in the Inland Empire/Desert Region, Jan 2017 – Dec 2017

Occupation	Top Certifications in Job Postings
Computer User Support Specialists *(n=241)*	• Certified A+ Technician • Security Clearance • Network+ Certified
Computer Systems Analysts *(n=91)*	• Casino Gaming License • Project Management Certification (e.g., PMP)
Computer Network Support Specialists *(n=24)*	• Advanced Certificate • Network+ Certified • Cisco Certified Network Professional (CCNP)
Computer, Automated Teller, and Office Machine Repairers *(n=4)*	• Certified A+ Technician

Source: Burning Glass – Labor Insights

Industry

Exhibit 7 displays the industries that employ the most computer support technician occupations in the two-county region. Staffing patterns show the industries employ the most of a specific occupation.

Exhibit 7: Top Industries employing each computer support technician occupation in the Inland Empire/Desert Region

Occupation	Top Industries Staffing Pattern (NAICS)	Top Industries Job Ads (NAICS)
Computer User Support Specialists *(n=326)*	• Education and Hospitals (Local Government) (9036) • Computer Systems Design and Related Services (5415)	• Electronics and Appliance Stores (4431)
Computer Systems Analysts *(n=290)*	• Computer Systems Design and Related Services (5415) • Local Government, Excluding Education and Hospitals (9039)	• Colleges, Universities, and Professional Schools (6113) • Executive, Legislative, and Other General Government Support (9211)
Computer Network Support Specialists *(n=19)*	• Computer Systems Design and Related Services (5415) • Education and Hospitals (Local Government) (9036)	• Executive, Legislative, and Other General Government Support (9211) • Software Publishers (5112)
Computer, Automated Teller, and Office Machine Repairers *(n=6)*	• Electronic and Precision Equipment Repair and Maintenance (8112) • Professional and Commercial Equipment and Supplies Merchant Wholesalers (4234)	• Commercial and Service Industry Machinery Manufacturing (3333) • Computer System Design and Related Services (5415)

Source: EMSI 2017.4, Burning Glass – Labor Insights

Student Completions

Exhibits 8 shows the annual average regional community college awards (associate degrees and certificates) conferred during the three academic years between 2013 and 2016, as well as other awards granted outside the California Community College system from 2012-2015, with the relevant TOP code. Please note, an award is not equivalent to a single person in search of a job opening since a student may earn more than one award, such as an associate degree in addition to a certificate.

Exhibit 8: Annual average community college student completions for the computer support program in the Inland Empire/Desert Region

0708.20 – Computer Support	Annual Average CC Headcount (2015-16)	Community College Annual Average Awards (2013-16)	Other Educational Institutions Annual Avg. Certificates or Other Credit Awards (2012-15)
Everest College-Ontario			
Award < 1 academic yr			3
Computer Training Academy			
Award < 1 academic yr			16
Chaffey	85		
Certificate 6 to < 18 semester units		1*	
Mt. San Jacinto College	40		
Total CC Headcount (2015-16)	**125**		
Total annual average community college awards		**1***	
Total annual average other awards			**19**

Source: LaunchBoard, IPEDS
*Chaffey awarded one certificate in 2014-15

0708.20 – Computer Support program outcomes in the Inland Empire/Desert Region in the academic year 2014-15:

- The median annual earnings is $19,154 (California median = $28,995).
- (No data for local region) Percent of students earning a living wage (43%).
- Median change in earnings was 171% (54%).
- 75% of students are employed within six months after completing a program (62%).

Sources

O*Net Online

Labor Insight/Jobs (Burning Glass)

Economic Modeling Specialists International (EMSI)

Employment Development Department, Labor Market Information Division, OES

Employment Development Department, Unemployment Insurance Dataset

CTE LaunchBoard

Statewide CTE Outcomes Survey

Living Insight Center for Community Economic Development

California Community Colleges Chancellor's Office Management Information Systems (MIS)

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January 2018

Appendix A: Occupation definitions, five-year projections, and earnings for computer support technician occupations

Occupation Definitions (SOC code), Education and Training Requirement, Community College Education Attainment

Computer Systems Analysts (15-1121)

Analyze science, engineering, business, and other data processing problems to implement and improve computer systems. Analyze user requirements, procedures, and problems to automate or improve existing systems and review computer system capabilities, workflow, and scheduling limitations. May analyze or recommend commercially available software.

Sample job titles: Applications Analyst, Business Analyst, Business Systems Analyst, Computer Analyst, Computer Systems Analyst, Computer Systems Consultant, Information Systems Analyst (ISA), Information Technology Analyst (IT Analyst), System Analyst, Systems Analyst

Entry-Level Educational Requirement: Bachelor's degree
Training Requirement: None
Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 22%

Computer User Support Specialists (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.

Sample job titles: Computer Specialist, Computer Support Specialist, Computer Technician, Desktop Support Technician, Help Desk Analyst, Help Desk Technician, Information Technology Specialist (IT Specialist), Network Technician, Support Specialist, Technical Support Specialist

Entry-Level Educational Requirement: Some college, no degree
Training Requirement: None
Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 43%

Computer Network Support Specialists (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.

Sample job titles: Computer Network Specialist, IT Consultant (Information Technology Consultant), Network Engineer, Network Specialist, Network Support Specialist, Network Technical Analyst, Network Technician, Personal Computer Network Analyst, Senior IT Assistant (Senior Information Technology Assistant), Systems Specialist

Entry-Level Educational Requirement: Associate degree
Training Requirement: None
Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 43%

Computer, Automated Teller, and Office Machine Repairers (49-2011)

Repair, maintain, or install computers, word processing systems, automated teller machines, and electronic office machines, such as duplicating and fax machines.

Sample of reported job titles: ATM Technician (Automated Teller Machine Technician), Computer Repair Technician, Computer Technician, Copier Technician, Customer Service Engineer, Field Engineer, Field Service Engineer, Field Service Technician, Field Technician, Service Technician

Entry-Level Educational Requirement: Some college, no degree
Training Requirement: Less than one month on-the-job training
Percentage of incumbent workers with a Community College Award or Some Postsecondary Coursework: 52%

Table 1. 2017 to 2022 job growth for the computer support technician occupational group, Inland Empire/Desert Region

Occupation (SOC)	2017 Jobs	2022 Jobs	5-Yr Change	5-Yr % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Computer User Support Specialists (51-1151)	3,926	4,290	364	9%	1,837	367
Computer Systems Analysts (15-1121)	2,057	2,315	258	13%	946	189
Computer, Automated Teller, and Office Machine Repairers (49-2011)	1,027	1,014	(13)	(1%)	536	107
Computer Network Support Specialists (15-1152)	983	1,077	94	10%	463	93
Total	**7,993**	**8,696**	**703**	**9%**	**3,783**	**757**

Source: EMSI 2017.4