** Amazon Web Services & Cloud Computing IT Support Occupations**

**Labor Market Information Report**

**Canada College**

Prepared by the San Francisco Bay Center of Excellence

for Labor Market Research

January 2019

# Recommendation

Based on all available data, there appears to be a significant undersupply of Amazon Web Services & Cloud Computing IT Support workers compared to the demand for this cluster of occupations in the Bay region and in the Mid-Peninsula sub-region (San Francisco and San Mateo counties). The gap is about 8,344 students annually in the Bay region and 1,958 students annually in the Mid-Peninsula Sub-Region.

This report also provides student outcomes data on employment and earnings for programs on TOP 0708.00 - Computer Infrastructure and 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 Canada College and in the region.

# Introduction

This report profiles Amazon Web Services & Cloud Computing IT Support Occupations in the 12 county Bay region and in the Mid-Peninsula sub-region for a proposed new program at Canada 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%* |
|  |
| * **Computer Systems Analysts (SOC 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.
 |
| *Entry-Level Educational Requirement: Bachelor's degree* |
| *Training Requirement: None* |
| *Percentage of Community College Award Holders or Some Postsecondary Coursework: 21%* |
|  |
| * **Network and Computer Systems Administrators** **(SOC 15-1142):** Install, configure, and support an organization’s local area network (LAN), wide area network (WAN), and Internet systems or a segment of a network system. Monitor network to ensure network availability to all system users and may perform necessary maintenance to support network availability. May monitor and test Web site performance to ensure Web sites operate correctly and without interruption. May assist in network modeling, analysis, planning, and coordination between network and data communications hardware and software. May supervise computer user support specialists and computer network support specialists. May administer network security measures. Excludes “Information Security Analysts”(15-1122), “Computer User Support Specialists” (15-1151), and “Computer Network Support Specialists” (15-1152).
 |
| *Entry-Level Educational Requirement: Bachelor's degree* |
| *Training Requirement: None* |
| *Percentage of Community College Award Holders or Some Postsecondary Coursework: 38%* |
|  |
| * **Computer Network Architects (SOC 15-1143):** Design and implement computer and information networks, such as local area networks (LAN), wide area networks (WAN), intranets, extranets, and other data communications networks. Perform network modeling, analysis, and planning. May also design network and computer security measures. May research and recommend network and data communications hardware and software. Excludes “Information Security Analysts” (15-1122), “Network and Computer Systems Administrators” (15-1142), and “Computer Network Support Specialists” (15-1152).
 |
| *Entry-Level Educational Requirement: Bachelor's degree* |
| *Training Requirement: None* |
| *Percentage of Community College Award Holders or Some Postsecondary Coursework: 35%* |

# Occupational Demand

**Table 1. Employment Outlook for Amazon Web Services & Cloud Computing IT Support Occupations in Bay Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation  | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Computer User Support Specialists | 29,420 | 33,562 | 4,142  | 14% | 15,339 | 3,068 | $19.98  | $32.72  |
| Computer Network Support Specialists | 6,612 | 7,503 | 891  | 13% | 3,402 | 680 | $22.43  | $37.05  |
| Computer Systems Analysts | 32,292 | 36,023 | 3,731  | 12% | 14,442 | 2,888 | $33.25  | $53.21  |
| Network and Computer Systems Administrators | 15,697 | 17,336 | 1,639  | 10% | 6,669 | 1,334 | $29.79  | $49.09  |
| Computer Network Architects | 8,291 | 9,134 | 843  | 10% | 3,594 | 719 | $32.71  | $65.90  |
| **Total** | **92,313** | **103,558** | **11,245** | **12%** | **43,445** | **8,689** | **$27.61**  | **$45.96**  |

*Source: EMSI 2018.4*

**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 Amazon Web Services & Cloud Computing IT Support Occupations in Mid-Peninsula Sub-Region**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Occupation  | 2017 Jobs | 2022 Jobs | 5-Yr Change | 5-Yr % Change | 5-Yr Open-ings | Annual Open-ings | 10% Hourly Wage | Median Hourly Wage |
| Computer User Support Specialists | 8,996 | 10,824 | 1,828  | 20% | 1,066 | 699 | $20.08  | $33.81  |
| Computer Network Support Specialists | 1,825 | 2,243 | 417  | 23% | 227 | 143 | $22.07  | $36.78  |
| Computer Systems Analysts | 11,488 | 13,364 | 1,876  | 16% | 1,147 | 769 | $36.72  | $56.09  |
| Network and Computer Systems Administrators | 4,714 | 5,495 | 781  | 17% | 463 | 306 | $29.24  | $51.19  |
| Computer Network Architects | 2,574 | 3,001 | 428  | 17% | 259 | 172 | $33.36  | $63.76  |
| **TOTAL** | **29,598** | **34,927** | **5,330**  | **18%** | **3,163** | **2,089** | **$29.28**  | **$48.01**  |

*Source: EMSI 2018.4*

**Mid-Peninsula Sub-Region** includes San Francisco and San Mateo counties

### Job Postings in Bay Region and Mid-Peninsula Sub-Region

**Table 3. Number of Job Postings by Occupation for latest 12 months (Jan 2018 - Dec 2018)**

| Occupation | Bay Region | Mid-Peninsula |
| --- | --- | --- |
| Computer Systems Analysts (15-1121.00) | 13,906 | 5,215 |
| Computer User Support Specialists (15-1151.00) | 13,318 | 4,744 |
| Network and Computer Systems Administrators (15-1142.00) | 6,819 | 2,208 |
| Computer Network Architects (15-1143.00) | 4,850 | 1,626 |
| Computer Network Support Specialists (15-1152.00) | 1,083 | 367 |
| Telecommunications Engineering Specialist (15-1143.01) | 536 | 163 |
| Informatics Nurse Specialists (15-1121.01) | 23 | 8 |
| **Total** | **40,535** | **14,331** |

*Source: Burning Glass*

**Table 4. Top Job Titles for Amazon Web Services & Cloud Computing IT Support Occupations for latest 12 months (Jan 2018 - Dec 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Common Title | Bay | Mid-Peninsula | Common Title | Bay | Mid-Peninsula |
| Business Systems Analyst | 2,319 | 518 | Software Development Engineer | 263 | 21 |
| Network Engineer | 1,988 | 379 | Systems Engineer | 255 | 43 |
| Systems Administrator | 1,556 | 321 | Lead Technician | 245 | 64 |
| Desktop Support | 952 | 185 | Customer Support Engineer | 223 | 13 |
| Developer | 847 | 106 | Information Technology Support Technician | 213 | 58 |
| Systems Analyst | 800 | 182 | Business Analyst | 206 | 31 |
| Technical Support Engineer | 730 | 76 | Senior Architect | 204 | 20 |
| Technical Consultant | 542 | 41 | Geek Squad Agent | 197 | 60 |
| Desktop Support Technician | 452 | 10 | Help Desk Specialist | 193 | 74 |
| Information Technology Specialist | 410 | 116 | Oracle Consultant | 193 | 58 |
| Linux Administrator | 400 | 49 | Information Technology Business Analyst | 189 | 88 |
| Technical Support Specialist | 391 | 103 | Information Technology Administrator | 185 | 87 |
| Help Desk Technician | 369 | 118 | Information Technology Consultant | 183 | 71 |
| Information Technology Support Specialist | 347 | 69 | Help Desk Analyst | 181 | 83 |
| Network Administrator | 346 | 80 | Geek Squad Agent | 179 | 43 |
| Information Technology Technician | 342 | 86 | Field Service Technician | 177 | 168 |
| Information Technology Analyst | 333 | 62 | PC Technician | 177 | 55 |
| Linux Systems Administrator | 316 | 54 | Help Desk Support | 171 | 82 |
| Senior Systems Administrator | 315 | 37 | Desktop Support Analyst | 168 | 78 |
| Technical Analyst | 277 | 69 | Aem Developer | 155 | 28 |
| Network Architect | 263 | 75 | Technical Support Analyst | 155 | 53 |

*Source: Burning Glass*

# Industry Concentration

**Table 5. Industries hiring Amazon Web Services & Cloud Computing IT Support Workers in Bay Region**

| Industry – 6 Digit NAICS (No. American Industry Classification) Codes | Jobs in Industry (2017) | Jobs in Industry (2022) | % Change (2017-22) | % in Industry (2017) |
| --- | --- | --- | --- | --- |
| Custom Computer Programming Services (541511) | 19,359 | 19,658 | 16% | 21.1% |
| Computer Systems Design Services (541512) | 12,243 | 12,248 | 12% | 13.1% |
| Internet Publishing and Broadcasting and Web Search Portals (519130) | 5,262 | 5,372 | 35% | 5.8% |
| Electronic Computer Manufacturing (334111) | 4,995 | 5,026 | 4% | 5.4% |
| Software Publishers (511210) | 4,443 | 4,561 | 21% | 4.9% |
| Data Processing, Hosting, and Related Services (518210) | 3,882 | 4,063 | 38% | 4.4% |
| Corporate, Subsidiary, and Regional Managing Offices (551114) | 3,639 | 3,742 | 6% | 4.0% |
| Other Computer Related Services (541519) | 2,705 | 2,732 | 20% | 2.9% |
| Colleges, Universities, and Professional Schools (State Government) (902612) | 1,915 | 1,971 | 10% | 2.1% |
| Local Government, Excluding Education and Hospitals (903999) | 1,670 | 1,676 | 4% | 1.8% |
| Colleges, Universities, and Professional Schools (611310) | 1,608 | 1,636 | 10% | 1.8% |
| Temporary Help Services (561320) | 1,392 | 1,385 | 5% | 1.5% |
| Wired Telecommunications Carriers (517311) | 1,150 | 1,113 |  (10%) | 1.2% |
| Research and Development in the Physical, Engineering, and Life Sciences (except Nanotechnology and Biotechnology) (541715) | 1,063 | 1,085 |  (6%) | 1.2% |
| Computer and Computer Peripheral Equipment and Software Merchant Wholesalers (423430) | 1,049 | 1,049 |  (3%) | 1.1% |

*Source: EMSI 2018.4*

**Table 6. Top Employers Posting Amazon Web Services & Cloud Computing IT Support Occupations in Bay Region and Mid-Peninsula Sub-Region (Jan 2018 - Dec 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Employer | Bay | Employer | Bay | Employer | Mid-Peninsula |
| Best Buy | 307 | Mumba Technologies | 81 | Accenture | 155 |
| Google Inc. | 303 | Scoop Technologies | 78 | Facebook | 132 |
| Accenture | 302 | Republic Bancorp | 75 | Deloitte | 101 |
| Apple Inc. | 226 | Stanford University | 75 | Salesforce | 80 |
| Cisco Systems Incorporated | 193 | Oracle | 73 | Wells Fargo | 74 |
| Facebook | 152 | Talbridge Limited | 70 | Matchpoint Solutions Incorporated | 72 |
| Deloitte | 149 | Etouch Systems Corporation | 68 | IBM | 67 |
| IBM | 134 | Bio-Rad Laboratories | 67 | Republic Bancorp | 67 |
| Matchpoint Solutions Incorporated | 130 | Nvidia Corporation | 67 | Best Buy | 66 |
| Kaiser Permanente | 129 | Milestone Technologies | 66 | Milestone Technologies Incorporated | 58 |
| Wipro | 120 | Microsoft Corporation | 65 | Google Inc. | 53 |
| Wells Fargo | 119 | Workday, Inc | 65 | Gap Inc. | 49 |
| Vmware Incorporated | 114 | Xoriant | 65 | Cisco Systems Incorporated | 47 |
| Milestone Technologies Incorporated | 110 | Redpoint Ventures | 63 | Milestone Technologies | 45 |
| Techfetch Com | 102 | Aramark | 62 | Oracle | 44 |
| Cynet Systems | 100 | NTT Data | 61 | Uber | 42 |
| K Anand Corporation | 94 | Palo Alto Networks | 60 | Bitsoft International Incorporated | 37 |
| Codeforce 360 | 90 | Servicenow | 60 | Wipro | 36 |
| Dgn Technologies | 87 | General Dynamics | 59 | Redpoint Ventures | 35 |
| Excell | 83 | Walmart / Sam's | 59 | Scoop Technologies | 35 |
| Salesforce | 83 | Intel Corporation | 58 | Xoriant | 35 |
| SAP | 82 | Ascent | 56 | Genentech | 33 |

*Source: Burning Glass*

# Educational Supply

There are 22 community colleges in the Bay Region issuing 345 awards annually on TOP 0708.20 - Computer Support, TOP 0708.00 - Computer Infrastructure and Support, and TOP 0708.10 - Computer Networking. There are three colleges in the Mid-Peninsula Sub-Region issuing 131 awards annually on these TOP codes.

**Table 7. Awards on TOP 0708.00 - Computer Infrastructure and Support, TOP 0708.10 - Computer Networking and TOP 0708.20 - Computer Support in the Bay Region**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| College | Sub-Region | TOPCode | Headcount | Associates | Certificates | Total |
| Contra Costa | East Bay | 70800 | n/a |  |  1  |  1  |
| Gavilan | Santa Cruz & Monterey | 70800 | 125 |  1  |  |  1  |
| Los Medanos | East Bay | 70800 | 304 |  4  |  4  |  8  |
| Ohlone | East Bay | 70800 | 184 |  |  1  |  1  |
| San Francisco | Mid-Peninsula | 70800 | n/a |  39  |  9  |  48  |
| San Mateo | Mid-Peninsula | 70800 | 43 |  1  |  2  |  3  |
| Contra Costa | East Bay | 70810 |  n/a  | 3 | 12 | 15 |
| Contra Costa  | East Bay | 70810 | 216 |  |  |  |
| Deanza | Silicon Valley | 70810 | 151 | 10 | 10 | 20 |
| Diablo Valley | East Bay | 70810 | 167 | 5 | 1 | 6 |
| Foothill | Silicon Valley | 70810 |  n/a  | 1 |  | 1 |
| Gavilan | Santa Cruz - Monterey | 70810 | 24 | 4 | 1 | 5 |
| Las Positas | East Bay | 70810 |  n/a  | 4 | 1 | 5 |
| Los Medanos | East Bay | 70810 |  n/a  | 7 | 8 | 15 |
| Mission | Silicon Valley | 70810 | 230 | 12 | 20 | 32 |
| Monterey | Santa Cruz - Monterey | 70810 | 97 |  | 1 | 1 |
| Ohlone | East Bay | 70810 | 495 | 3 | 17 | 20 |
| San Francisco | Mid-Peninsula | 70810 | 1,289 |  | 50 | 50 |
| San Jose City | Silicon Valley | 70810 | 154 | 6 | 7 | 13 |
| San Mateo  | Mid-Peninsula | 70810 | 38 |  |  |  |
| Santa Rosa | North Bay | 70810 | 39 |  | 20 | 20 |
| Skyline | Mid-Peninsula | 70810 |  n/a  | 4 | 1 | 5 |
| Alameda | East Bay | 70820 | 29 |  |  |  |
| Cabrillo | Santa Cruz & Monterey | 70820 | n/a | 3 | 8 | 11 |
| Contra Costa | East Bay | 70820 | n/a |  | 5 | 5 |
| Diablo Valley | East Bay | 70820 |  | 6 | 7 | 14 |
| Gavilan | Santa Cruz & Monterey | 70820 | 23 |  |  |  |
| Hartnell | Santa Cruz & Monterey | 70820 |  | 3 | 2 | 4 |
| Mission | Silicon Valley | 70820 | 45 |  |  |  |
| Monterey | Santa Cruz & Monterey | 70820 | 18 |  |  |  |
| Ohlone | East Bay | 70820 | n/a | 2 | 2 | 4 |
| San Francisco | Mid-Peninsula | 70820 | 260 |  | 27 | 27 |
| San Francisco College Centers | Mid-Peninsula | 70820 | 219 |  |  |  |
| San Jose City | Silicon Valley | 70820 |  38  |  |  |  |
| Santa Rosa | North Bay | 70820 | 86 |  | 10 | 10 |
| **Total Bay Region** |  |  **4,274**  |  **117**  |  **228**  |  **345**  |
| **Total Mid-Peninsula Sub-Region** |  |  **2,303**  |  **28**  |  **103**  |  **131**  |

# *Source: IPEDS, Data Mart and Launchboard*

NOTE: Headcount of students who took one or more courses is for 2016-17. The annual average for awards is 2014-17 unless there are only awards in 2016-17. The annual average for other postsecondary is for 2013-16.

# Gap Analysis

Based on the data included in this report, there is a large labor market gap in the Bay region with 8,689 annual openings for the Amazon Web Services & Cloud Computing IT Support occupational cluster and 345 annual awards for an annual undersupply of 8,344 students. In the Mid-Peninsula Sub-Region, there is also a gap with 2,089 annual openings and 131 annual awards for an annual undersupply of 1,958 students.

# Student Outcomes

**Table 8. Four Employment Outcomes Metrics for Students Who Took Courses on TOP 0708.00 - Computer Infrastructure and Support**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| 2015-16 | Bay (All CTE Programs) | Canada College (All CTE Programs) | State (0708.00) | Bay (0708.00) | Mid-Peninsula (0708.00) | Canada College (0708.00) |
| % Employed Four Quarters After Exit | 74% | 65% | 66% | 72% | 76% | n/a |
| Median Quarterly Earnings Two Quarters After Exit | $10,550 | n/a | $26,274 | $27,833 | $27,940 | n/a |
| Median % Change in Earnings | 46% | n/a | 37% | 47% | 35% | n/a |
| % of Students Earning a Living Wage | 63% | n/a | 62% | 68% | 75% | n/a |

*Source: Launchboard Pipeline (version available on 1/13/19)*

# Skills, Certifications and Education

**Table 9. Top Skills for Amazon Web Services & Cloud Computing IT Support Occupations in Bay Region (Jan 2018 - Dec 2018)**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Skill | Postings | Skill | Postings | Skill | Postings |
| Technical Support | 8,839 | SAP | 2,762 | Scheduling | 2,230 |
| Customer Service | 6,880 | Business Systems Analysis | 2,720 | Microsoft Operating Systems | 2,211 |
| Linux | 5,853 | Information Systems | 2,720 | Virtual Private Networking (VPN) | 2,177 |
| SQL | 5,063 | Hardware and Software Installation | 2,660 | Wide Area Network (WAN) | 2,167 |
| Project Management | 4,751 | Help Desk Support | 2,636 | Network Troubleshooting | 2,153 |
| System Administration | 4,482 | Business Systems | 2,605 | Routers | 2,129 |
| Python | 4,387 | Network Engineering | 2,565 | Business Analysis | 2,032 |
| Oracle | 3,876 | UNIX | 2,508 | Software Installation | 2,026 |
| Business Process | 3,823 | Printers | 2,489 | Quality Assurance and Control | 2,015 |
| Java | 3,817 | Transmission Control Protocol / Internet Protocol  | 2,489 | Hardware and Software Configuration | 2,006 |
| Cisco | 3,786 | Domain Name System (DNS) | 2,481 | Salesforce | 1,990 |
| Microsoft Active Directory | 3,651 | Customer Contact | 2,450 | Virtualization | 1,945 |
| Repair | 3,317 | It Support | 2,394 | Hardware Troubleshooting | 1,910 |
| Software Development | 2,822 | Systems Analysis | 2,276 | Troubleshooting Technical Issues | 1,769 |
| VMware | 2,814 | JavaScript | 2,230 | System/Network Configuration | 1,767 |

*Source: Burning Glass*

**Table 10. Certifications for Amazon Web Services & Cloud Computing IT Support Occupations in the Bay Region (Jan 2018 - Dec 2018)**

Note: 82% 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 |
| IT Infrastructure Library (ITIL) Certification | 1,451 | Juniper Networks Certified Internet Expert | 108 |
| Driver's License | 1,254 | Certified Information Systems Auditor (CISA) | 101 |
| Certified A+ Technician | 1,107 | Microsoft Certified Technology Specialist (MCTS) | 98 |
| Cisco Certified Network Associate (CCNA) | 965 | Cisco Certified Design Professional (CCDP) | 92 |
| Cisco Certified Network Professional (CCNP) | 913 | Juniper Networks Certified Internet Professional | 89 |
| Cisco Certified Internetwork Expert (CCIE) | 658 | Juniper Networks Certified Internet Associate | 88 |
| ITIL Certification | 432 | Microsoft Certified Desktop Support Technician (Legacy) | 86 |
| CompTIA Network+ | 408 | Red Hat Certified Engineer (RHCE) | 86 |
| Project Management Certification | 408 | Certified Scrum Trainer (CST) | 82 |
| Microsoft Certified Professional (MCP) | 397 | SANS/GIAC Certification | 74 |
| Microsoft Certified Solutions Expert (MCSE) | 372 | Six Sigma Certification | 67 |
| Security Clearance | 368 | Certified Salesforce Administrator | 64 |
| Microsoft Certified Solutions Associate (MCSA) | 364 | Vmware Certified | 61 |
| CompTIA Security+ | 290 | Red Hat Certified System Administrator  | 55 |
| Certified Information Systems Security Professional (CISSP) | 259 | Computer Science Certification | 49 |
| Project Management Professional (PMP) | 166 | Certified Wireless Network Administrator (CWNA) | 46 |
| Apple Certified Macintosh Technician | 147 | CompTIA Server+ | 46 |
| Vmware Certified Professional (VCP) | 128 | Information Systems Certification | 46 |
| ITIL Foundation | 108 | Information Technology Certification | 44 |

*Source: Burning Glass*

**Table 11. Education Requirements for Amazon Web Services & Cloud Computing IT Support Occupations in Bay Region**

Note: 53% 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 |
| High school or vocational training | 1,870 (10%) |
| Associate Degree | 1,291 (7%) |
| Bachelor’s Degree or Higher | 15,987 (83%) |

*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/](http://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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