

Labor Market Assessment: Data Science Occupations (TOP 0702.00 Computer Information Systems) (CIP 11.0501 Computer Systems Analysis/Analyst)

Inland Empire/Desert Center of Excellence, July 2026

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FOR LABOR MARKET RESEARCH

INLAND EMPIRE/DESERT

Summary

Program LMI Endorsement	All LMI Criteria Met	Some LMI Criteria Met (Proceed with Caution)	LMI Criteria NOT Met
	☐	☒	☐

Program LMI Endorsement Criteria		
Supply Gap	Yes ☒	No ☐
	Comments: There is <i>projected</i> to be 438 annual job openings throughout the Inland Empire/Desert region, which is more than the 429 annual average awards conferred by educational institutions over the last 3 years . Supply data includes both community college awards (183) and non-community college awards (246).	
Living Wage	Yes ☒	No ☐
	Comments: All occupations have entry-level hourly wages \$15-\$29 above the IE/D living wage of 20.42¹ .	
Education	Yes ☐	No ☒
	Comments: None of the assessed occupations have some college or postsecondary degree or associate degree as their typical entry-level education level . Additionally, less than 33% of all workers in the field (10%) have completed some college or an associate degree as their highest level of education . See Exhibit 9 for more details.	

The Inland Empire/ Desert (IE/D) Center of Excellence for Labor Market Research (IE/D COE) reviewed the following occupations to prepare this report:

- Above Middle-Skill (typically require a bachelor's degree)
 - Software Developers (15-1252)
 - Data Scientists (15-2051)

Summary of findings

Demand

- The number of jobs related to the assessed occupations is projected to increase 12% through 2029, with 438 annual job openings (new and replacement jobs).
- Hourly entry-level wages for all occupations are above living wage at the 25th percentile hourly wage ranging from \$35.75 to \$49.39 in IE/D.
- There were 1,389 online job postings from 346 employers over the past 12 months with the highest postings for AI trainers and software developers.
- Most job postings for target occupations require a bachelor's degree (81%), followed by above a bachelor's degree (10%), associate degree (6%), and a high school diploma or equivalent (4%).

Supply

- On average, there were 429 annual awards conferred by educational institutions over the last 3 years in related fields: 183 from community colleges and 246 from other institutions (e.g., 4-year universities, private schools).
- IE/D community college students that exited these programs in the 2023-24 academic year earned a median annual wage of \$38,196 (\$18.36 per hour).
- 43% of students that exited their program in 2023-24 reported that they are now earning a living wage.

¹ The [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2024.

Introduction

California Community College Computer Information Systems (TOP 0702.00) programs prepare students for employment in the general programs in data and information storage and processing, including hardware, software, basic design principles, and user requirements (Taxonomy of Programs, 2023). The knowledge, skills, and abilities trained by Computer Information Systems programs lead to employment in occupations related to data science.

Job Demand

In 2024, there were 5,802 jobs in occupations related to data science in the IE/D region. Regional employment for this occupation group is projected to increase by 12% through 2029 with 438 job openings projected annually. Exhibit 1 displays the job count, five-year projected job growth, and job openings in the region.

Exhibit 1. Five-year projections for occupations related to data science, IE/D Region, 2024-2029

Occupation	SOC	2024 Jobs	2029 Jobs	2024 - 2029 % Change	5-Yr Openings (New + Replacement Jobs)	Annual Openings (New + Replacement Jobs)
Data Scientists	15-2051	914	1,102	21%	449	90
Software Developers	15-1252	4,888	5,408	11%	1,741	348
Total		5,802	6,510	12%	2,190	438

SOURCE: LIGHTCAST 2026.2

Job Postings

The following analysis for occupations related to data science using online job posting data.

Important note: The data produced in this section were generated by leveraging online job posting data sourced from Lightcast, which is the labor market analytics software tool COEs use to produce these briefs. The job posting data is collected from scraping online job boards such as LinkedIn, Indeed, Glassdoor and many others. The process Lightcast uses to assemble this data does have some limitations due to methods that recruitment professionals sometimes use (e.g., posting one job to fill multiple positions). For example, the number of jobs posted is not necessarily the same as the number of job vacancies.² While not perfect, Lightcast leverages machine learning and other AI technologies to enrich, de-duplicate and aggregate this information to make it a meaningful dataset.

Exhibit 2 displays the number of job ads posted for occupations related to data science over the last 12 months and the median posting duration. Over the previous 12 months, there were 1,389 unique job postings for occupations related to data science in the region from 346 employers.

Exhibit 2. Job ads and posting duration, IE/D Region, Jul 2025 – Jun 2026

Job Title	Job Ads	Median Posting Duration
Software Developers	936	17 days
Data Scientists	453	20 days
Total	1,389	

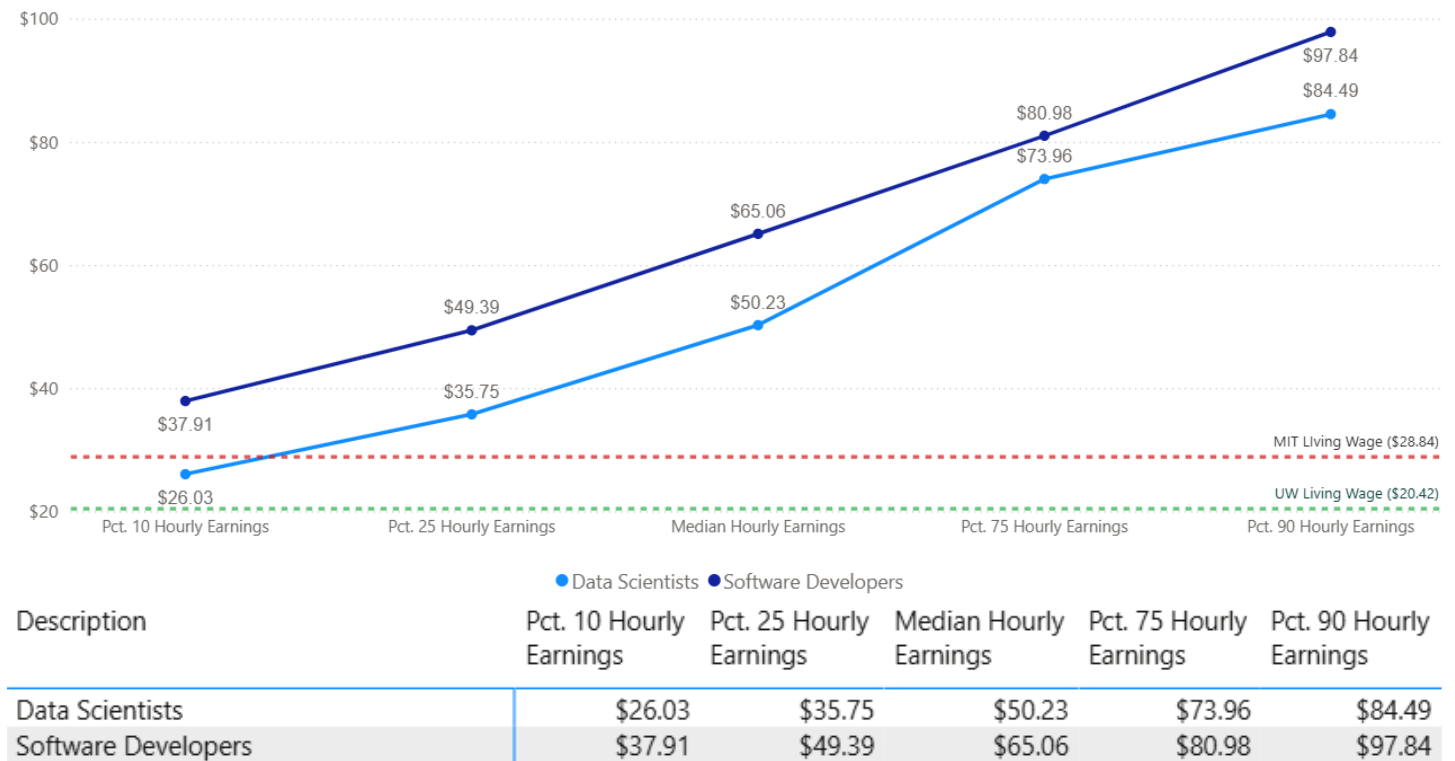
SOURCE: LIGHTCAST 2026.2

² "Job Posting Analytics (JPA) Methodology." Lightcast Knowledge Base, <https://kb.lightcast.io/en/articles/6957446-job-posting-analytics-jpa-methodology>

Earnings

Exhibit 3 displays the hourly earnings for occupations related to data science compared to both the UW Self-Sufficiency Standard for the IE/D of \$20.42³ and the MIT IE/D living wage of \$28.84.⁴

Exhibit 3. Projected hourly earnings by percentile, IE/D Region, 2024



SOURCE: 2026.2

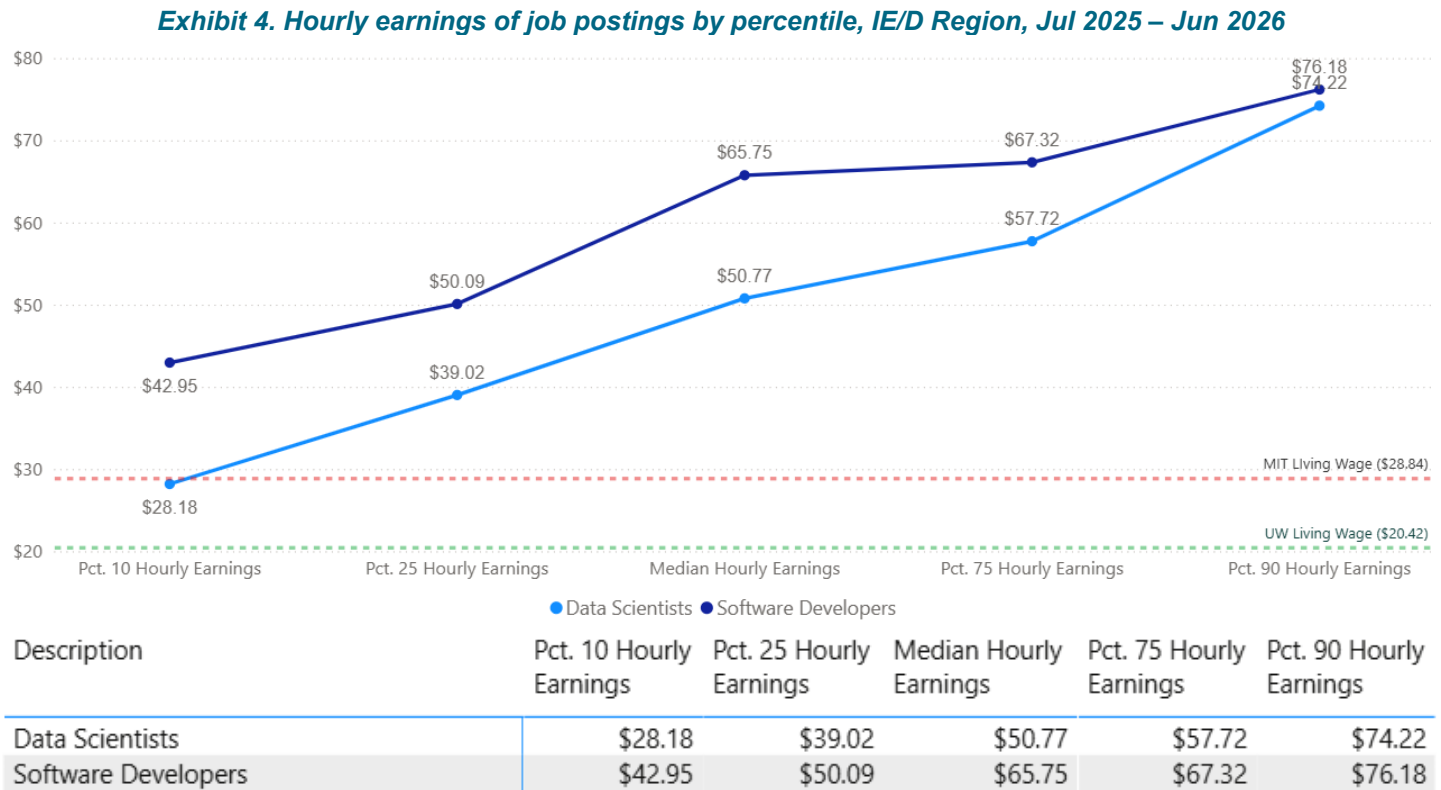
The projected entry-level earnings (that is, the earnings of the lowest paid 25% of employees in the IE/D) for all occupations were above the UW Self-Sufficiency Standard for the IE/D (see Exhibit 3). Additionally, all occupations were also above the MIT living wage for an adult with no children (\$28.84) in projected entry-level earnings (see Exhibit 3).

³ The [UW self-sufficiency standard](#) is currently used by the CO and other COEs, the self-sufficiency standard was last updated by UW in 2024. To provide an alternative perspective, the COE will provide an alternative living wage calculation from MIT in the analysis below as an additional reference point. MIT estimates, the living wage for an adult with no kids living in 2024 is \$28.84 in Riverside County and \$27.60 in San Bernadino County.

⁴ *ibid.*

Advertised Salary from Online Job Ads

Exhibit 4 displays the regional online advertised salaries for the occupations related to data science over the last 12 months. The salary information of online job ad data suggests employers advertise entry level hourly wages between \$39.02 and \$50.09 (estimated to be equal to an annual salary between \$81,162 and \$104,187).



Online Job Advertisements: top job titles, skills, education & work experience.

Exhibit 5 displays the job titles most frequently used in job postings for the occupations related to data science over the last 12 months. Assessing the top advertised job titles may provide insight into the types of positions sought by employers.

Exhibit 5. Job titles most frequently used in job ads, IE/D Region, Jul 2025 – Jun 2026

Job Title	Unique Postings
AI Trainers	54
Software Developers	50
Software Engineers	45
Data Analysts	43
EHR Application Analysts	38
Application Engineers	30
Software Development Engineers	29
.NET Developers	12
Android Leads	12
Evaluation Engineers	12
Solutions Architects	12

SOURCE: LIGHTCAST 2026.2

Exhibit 6 displays the employers posting the most job ads for this occupational group during the last 12 months. Showing employer names can provide insight into where students may find employment after completing a program and may inform job development and other employer engagement targets for faculty and staff involved in related programs. Esri and Circle – Data Annotation had the highest unique job posts for this occupational group in the last 12 months. Posting intensity is the ratio of total job posts to unique job posts which are de-duplicated. A higher posting intensity can represent the level of effort and activity the organization is putting into hiring for that position. The following report comes directly from Lightcast’s Job Posting Analytics dashboard.

**Exhibit 6. Employers posting the most job ads,
IE/D Region, Jul 2025 – Jun 2026**

Company	Total/Unique (Jul 2025 - Jun 2026)	Posting Intensity	Median Posting Duration
Esri	648 / 249	3 : 1	22 days
Circle - Data Annotation	60 / 60	1 : 1	6 days
Prime Healthcare Services	150 / 49	3 : 1	13 days
San Bernardino County	123 / 42	3 : 1	23 days
Speechify	45 / 35	1 : 1	18 days
Vsolvit	87 / 28	3 : 1	33 days
Monster Beverage	46 / 27	2 : 1	20 days
Turing	30 / 26	1 : 1	6 days
Inland Empire Health Plan	83 / 21	4 : 1	38 days
CACI International	104 / 20	5 : 1	32 days

SOURCE: LIGHTCAST 2026.2

Exhibit 7 displays the top common, specialized and computer skills that were included in the job postings over the last 12 months. Today’s demand is an important indicator of which skills employers are looking for in the current market. Analyzing skills from a historical perspective as well as projecting the future needs of employers may provide insight into how the job posting skills demand compares to the market as a whole. Rapidly growing skills are those that are increasing in demand at a faster rate than the market as a whole.⁵

⁵ “What are Lightcast Skill Projects”, Lightcast Knowledge base, <https://kb.lightcast.io/en/articles/8496296-what-are-lightcast-skill-projections>

**Exhibit 7. Top 10 in-demand skills from employer job ads,
IE/D Region, Jul 2025 – Jun 2026**

Common skills	Total Postings	Skill Growth Relative to Market
Communication	694	Stable
Problem Solving	417	Growing
Troubleshooting (Problem Solving)	352	Growing
Detail Oriented	304	Stable
Operations	286	Stable
Management	284	Stable
Leadership	223	Growing
Planning	219	Growing
Innovation	160	Rapidly Growing
Verbal Communication Skills	160	Stable
Decision Making	142	Growing
Microsoft Excel	142	Growing

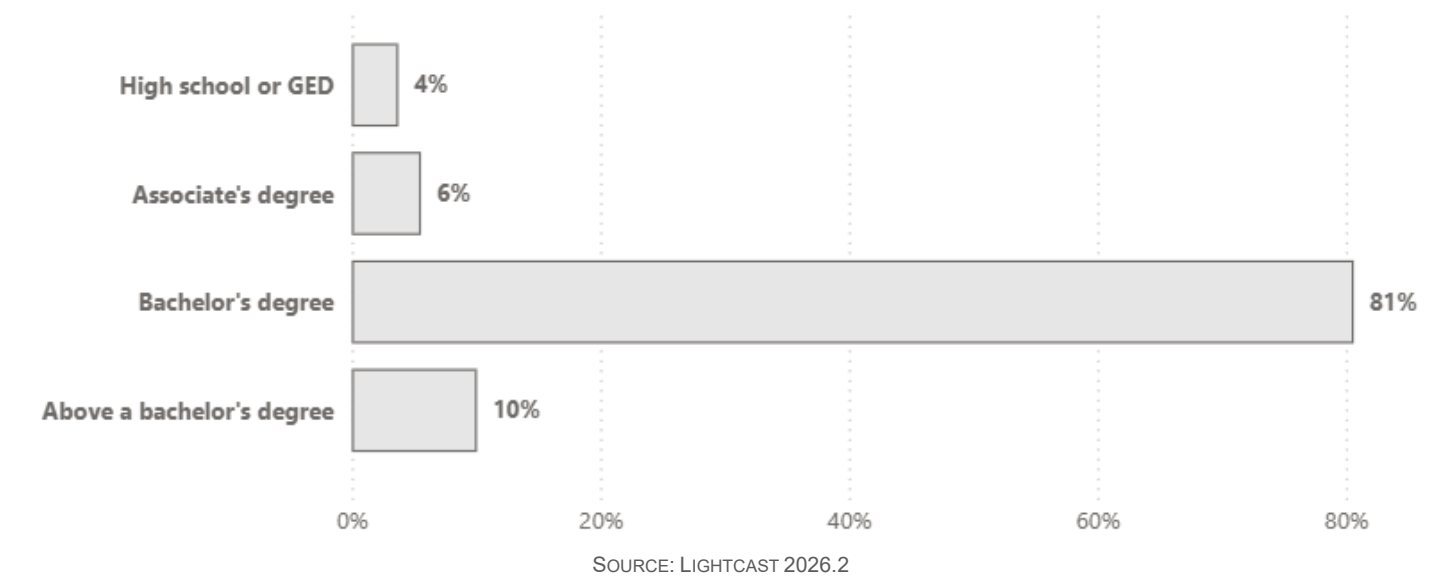
Specialized skills	Total Postings	Skill Growth Relative to Market
Computer Science	598	Rapidly Growing
Workflow Management	457	Growing
Python (Programming Language)	347	Rapidly Growing
Scalability	335	Rapidly Growing
Application Programming Interface (API)	326	Stable
SQL (Programming Language)	313	Stable
Artificial Intelligence	297	Rapidly Growing
Data Analysis	293	Rapidly Growing
Amazon Web Services	199	Rapidly Growing
Microsoft Azure	199	Rapidly Growing
Software Design Patterns	145	Stable
Version Control	145	Stable

Computer Skills	Total Postings	Skill Growth Relative to Market
Python (Programming Language)	347	Rapidly Growing
Application Programming Interface (API)	328	Stable
SQL (Programming Language)	314	Stable
JavaScript (Programming Language)	243	Growing
ArcGIS (GIS Software)	231	Growing
C# (Programming Language)	207	Stable
Microsoft Azure	203	Rapidly Growing
Amazon Web Services	200	Rapidly Growing
Git (Version Control System)	177	Stable
Microsoft Excel	142	Growing
RESTful API	142	Growing

SOURCE: LIGHTCAST 2026.2

Exhibit 8 includes the minimum educational requirements from job postings for this occupational group with bachelor's degree (81%) significantly greater than above a bachelor's degree (10%) or associate degree (6%) or high school diploma or equivalent (4%).

Exhibit 8 Minimum educational requirements in job postings for this occupational group, IE/D Region, Jul 2025 – Jun 2026



For the assessed occupations, the Bureau of Labor Statistics (BLS) education attainment data in Exhibit 9 for current professionals in the occupations of interest indicates that between 10% and 11% of workers have completed some college or an associate degree as their highest level of education.

Exhibit 9 National-level Education Attainment for the Occupational Group

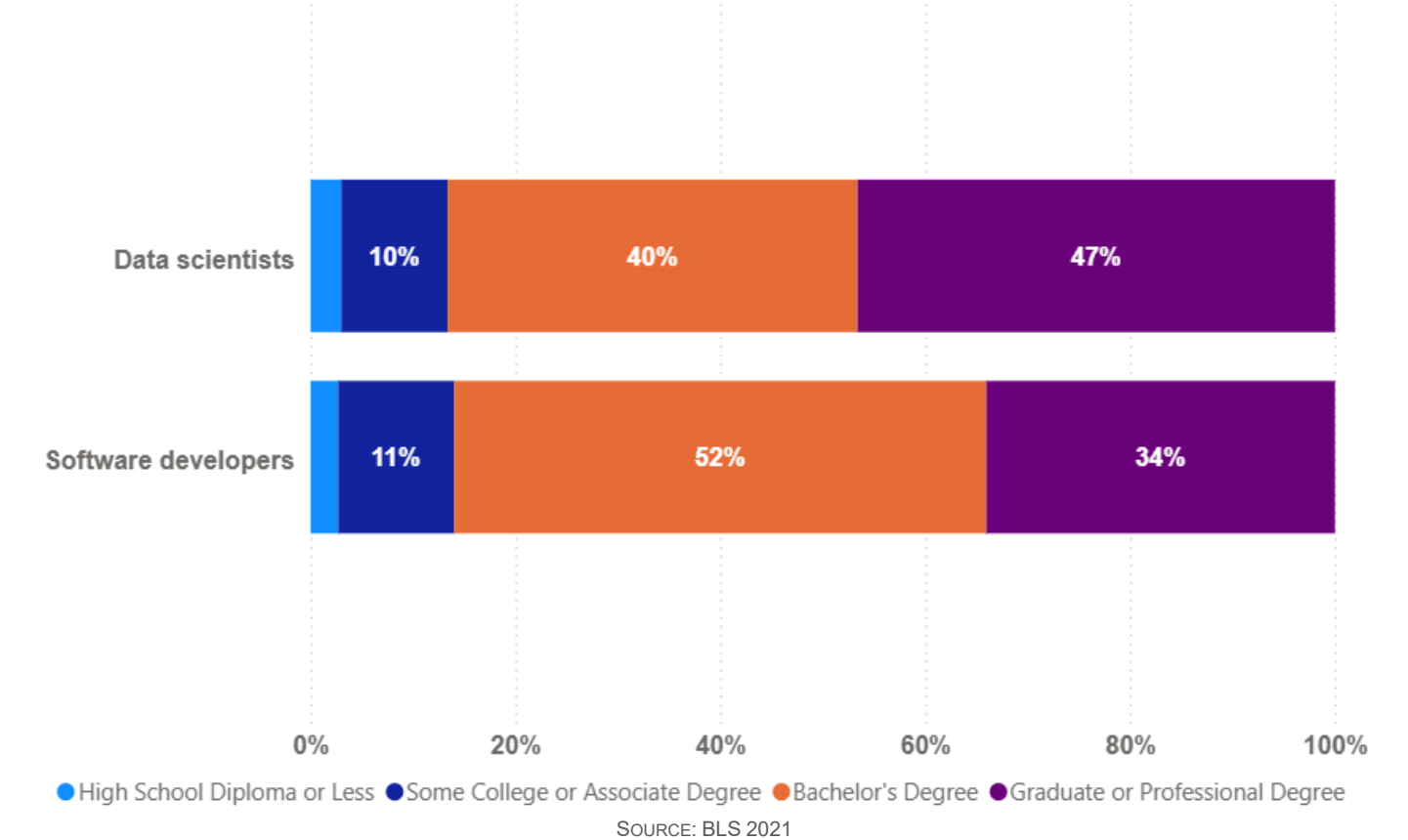
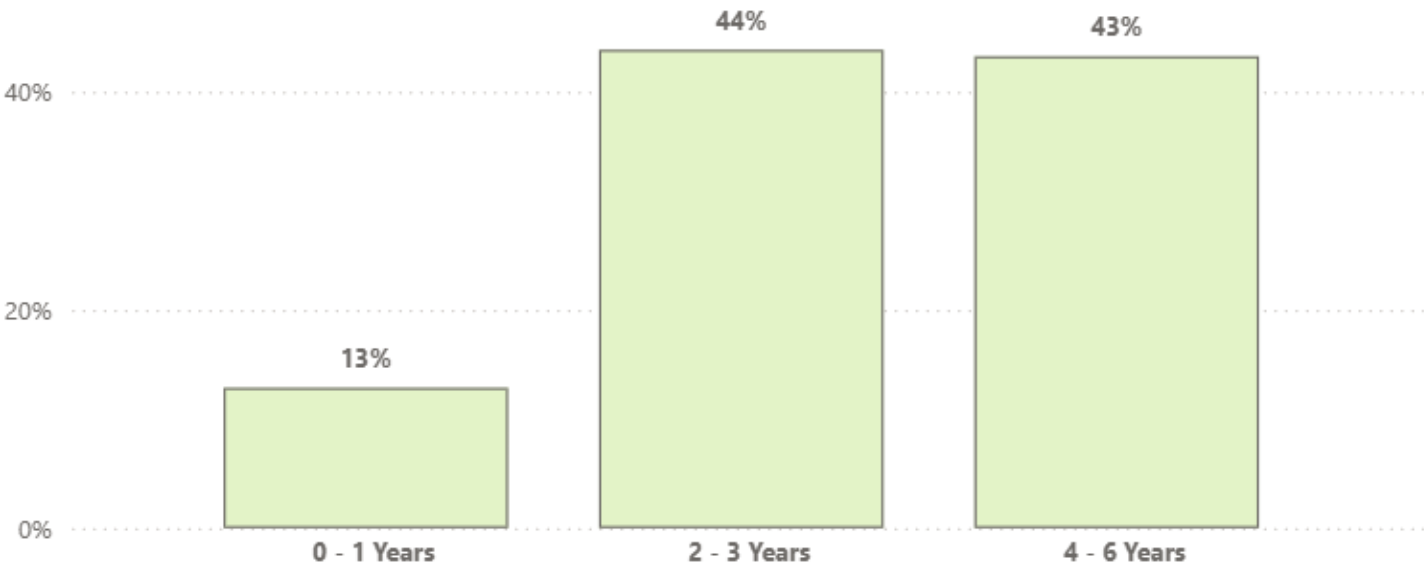


Exhibit 10 displays the work experience typically required from employer job ads for this occupational group. The majority (57%) of employers listing minimum experience requirements sought candidates with 0-3 years of previous work experience.

**Exhibit 10 Work experience requirements,
IE/D Region, Jul 2025 – Jun 2026**



SOURCE: LIGHTCAST 2026.2

Student Completions and Program Outcomes

Exhibit 11 displays student completions for the Computer Information Systems (TOP 0702.00) programs over the last three academic years (2022-2025). In the previous three academic years, nine regional community colleges issued an average of 183 awards in relevant programs.

Exhibit 11 Annual average community college awards for Computer Information Systems (TOP 0702.00), IE/D, 2022-2025

Top Code	Program	College	2022-2023 Awards	2023-2024 Awards	2024-2025 Awards	3-Year Award Average
0702.00	Computer Information Systems	Barstow	27	78	69	58
0702.00	Computer Information Systems	Chaffey	25	45	32	34
0702.00	Computer Information Systems	College of the Desert	6	6	12	8
0702.00	Computer Information Systems	Copper Mountain College	0	0	3	1
0702.00	Computer Information Systems	Crafton Hills	5	1	7	4
0702.00	Computer Information Systems	Mt. San Jacinto	25	26	32	28
0702.00	Computer Information Systems	Palo Verde	2	3	5	3
0702.00	Computer Information Systems	San Bernardino	7	11	27	15
0702.00	Computer Information Systems	Victor Valley	30	38	27	32
Total			127	208	214	183

SOURCE: MIS DATA MART

Non-Community College Supply

Exhibit 12 displays award completion data available for these IE/D non-community college programs over the last three academic years (2021-2024): Information Technology (CIP 11.0103).

However, student award completion data was not found in the IE/D for other related non-community college programs: Computer and Information Sciences, General (CIP 11.0101), Data Science, General (CIP 30.7001), Data Science, General (CIP 30.7001), Data Analytics, General (CIP 30.7101), Data Visualization (CIP 30.7103), Computer Systems Analysis/Analyst (CIP 11.0501), Computer/Computer Systems Technology/Technician (CIP 15.1202).

In the previous three academic years, three regional non-community college institutions issued an average of 246 awards in relevant programs.

Exhibit 12 Annual average non-community college awards for data science programs, IE/D, 2021-2024

CIP	Program	College	2021-2022 Awards	2022-2023 Awards	2023-2024 Awards	3-Year Award Average
11.0103	Information Technology	DeVry University-California	115	204	354	224
11.0103	Information Technology	Platt College-Ontario	9	12	16	12
11.0103	Information Technology	Platt College-Riverside	6	13	8	9
Total			130	229	378	246

SOURCE: IPEDS

Strong Workforce Program Outcomes

California SWP program outcome data may provide useful insight into the likelihood of success for the proposed program. Community college student outcome information based on the selected TOP code and region is provided in Exhibit 13.

Exhibit 13 Computer Information Systems strong workforce program outcomes, IE/D & California, AY 2023-24

Program Metric Title	Inland Empire	Statewide
Students	6,913	24,409
Earned 9+ Career Education Units	33%	37%
Completed Noncredit Workforce Preparation Milestone	68%	68%
Earned an Award: Degree or Cert or Attained Appren. Journey Level Status	3%	5%
Transferred to a Four-Year Institution: Four-Year Postsecondary Institution	8%	10%
Median Annual Earnings	\$38,196	\$43,978
Median Change in Earnings	24%	24%
Attained Living Wage	43%	43%

SOURCE: DATAVISTA

Appendix: Methodology

Exhibit 11 displays the average annual California Community College (CCC) awards conferred during the three academic years between 2022 and 2025 from the California Community Colleges Chancellor's Office Management Information Systems (MIS) Data Mart. Awards are the combined total during the timeframe, divided by three in this case to calculate an annual average. This is done to minimize the effect of atypical variations that might be present in a single year.

Community college student outcome information is from DataVista and based on the selected TOP code and region. These metrics are based on records submitted to the California Community Colleges Chancellor's Office Management Information Systems (MIS) by community colleges, which come from self-reported student information from CCC Apply and the National Student Clearinghouse. Employment and earnings metrics are sourced from California's Employment Development Department's Unemployment Insurance database. When available, outcomes for completers are reported to demonstrate the impact that earning a degree or certificate can have on employment and earnings. For more information on the types of students included for each metric, please see the web link for DataVista's Strong Workforce Program Metrics Data Element Dictionary in the Resources section (DataVista, 2025).

Appendix: References

Type of Data	Source
Occupational Projections, Wages, and Job Postings	Traditional labor market information data is sourced from Lightcast, a labor market analytics firm. Lightcast occupational employment data are based on final Lightcast industry data and final Lightcast staffing patterns. Wage estimates are based on Occupational Employment. https://lightcast.io/
Living Wage (UW)	Center for Women's Welfare, University of Washington. (2024). The self-sufficiency standard for California 2024. http://www.selfsufficiencystandard.org/California . The COE refers to the Self-Sufficiency Wage as a "living wage." This calculation measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. The living wage for one adult in San Bernardino County is \$20.07 per hour (\$57,408 annually). The living wage for one adult in Riverside County is \$20.76 per hour (\$43,854 annually). The average of the two, \$20.42 per hour (\$42,474 annually), is used to represent the Inland Empire/Desert living wage.
Living Wage (MIT)	<i>Living wage data sourced from the Living Wage Institute via</i> https://livingwage.mit.edu/counties/06065 ; https://livingwage.mit.edu/counties/06071 , Accessed on June 6, 2026. The living wage is derived from MIT's Living Wage Calculator, which measures the income necessary for an individual of family to afford basic expenses. The data assesses the cost of housing, food, childcare, health care, transportation, and taxes. For more information, see: https://livingwage.mit.edu/pages/methodology . The living wage for one adult in San Bernardino County is \$27.60 per hour (\$52,353.60 annually). The living wage for one adult in Riverside County is \$28.84 per hour (\$59,987 annually). The higher of the two, \$28.84 per hour (\$59,987 annually), is used to represent the Inland Empire/Desert living wage.
Typical Education and Training Requirements, and Educational Attainment	The Bureau of Labor Statistics (BLS) provides information about education and training requirements for hundreds of occupations. BLS uses a system to assign categories for entry-level education, work experience in a related occupation, and typical on-the-job training to each occupation for which BLS publishes projections data. For more information, see https://www.bls.gov/emp/documentation/education/tech.htm

Educational Supply	The CCCC Data Mart provides information about students, courses, student services, outcomes and faculty and staff. For more information, see: https://datamart.cccco.edu The National Center for Education Statistics (NCES) Integrated Postsecondary Integrated Data System (IPEDS) collects data on the number of postsecondary awards earned (completions). For more information, see https://nces.ed.gov/ipeds/use-the-data/survey-components/7/completions
Student Metrics and Demographics	DataVista aims to provide up-to-date and useful information on students within the California Community Colleges and its Adult Education partners. DataVista is a modernization of the supporting architecture and visualization of metrics previously available on the LaunchBoard. DataVista is a collaboration between the California Community Colleges Chancellor's Office and WestEd, see: https://datavista.cccco.edu/data_views/swp_report