5 Computer and Mathematical Occupations
in San Diego-Chula Vista-Carlsbad, CA

Contents

What is Lightcast Data?

Lightcast data is a hybrid dataset derived from official government sources such as the US Census Bureau, Bureau of Economic Analysis, and Bureau of Labor Statistics. Leveraging the unique strengths of each source, our data modeling team creates an authoritative dataset that captures more than 99% of all workers in the United States. This core offering is then enriched with data from online social profiles, resumés, and job postings to give you a complete view of the workforce.

Lightcast data is frequently cited in major publications such as *The Atlantic*, *Forbes*, *Harvard Business Review*, *The New York Times*, *The Wall Street Journal*, and *USA Today*.

Report Parameters

5 Occupations

15-1251	Computer Programmers		15-1242	Database Administrators
15-1252	Software Developers		15-1299	Computer Occupations, All Other
15-1211	Computer Systems Analysts			

1 MSA

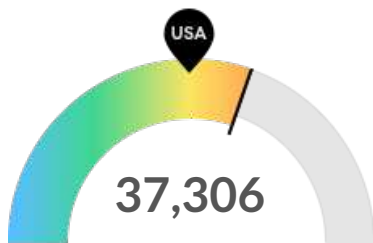41740   San Diego-Chula Vista-Carlsbad, CA

Class of Worker

QCEW Employees

The information in this report pertains to the chosen occupations and geographical area.

Executive Summary

## Average Job Posting Demand Over a Deep Supply of Regional Jobs

37,306
Jobs (2023)

San Diego-Chula Vista-Carlsbad, CA is a hotspot for this kind of job. The national average for an area this size is 27,693* employees, while there are 37,306 here.

$136,458
Compensation

Earnings are high in San Diego-Chula Vista-Carlsbad, CA. The national median salary for your occupations is $120,340, compared to $136,458 here.
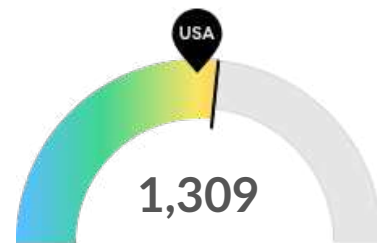
1,309
Job Posting Demand

Job posting activity is about average in San Diego-Chula Vista-Carlsbad, CA. The national average for an area this size is 1,189* job posting/mo, while there is 1,309 here.

*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and San Diego-Chula Vista-Carlsbad, CA. In other words, the values represent the national average adjusted for region size.

Jobs

## Regional Employment Is Higher Than the National Average

An average area of this size typically has 27,693* jobs, while there are 37,306 here. This higher than average supply of jobs may make it easier for workers in this field to find employment in your area.
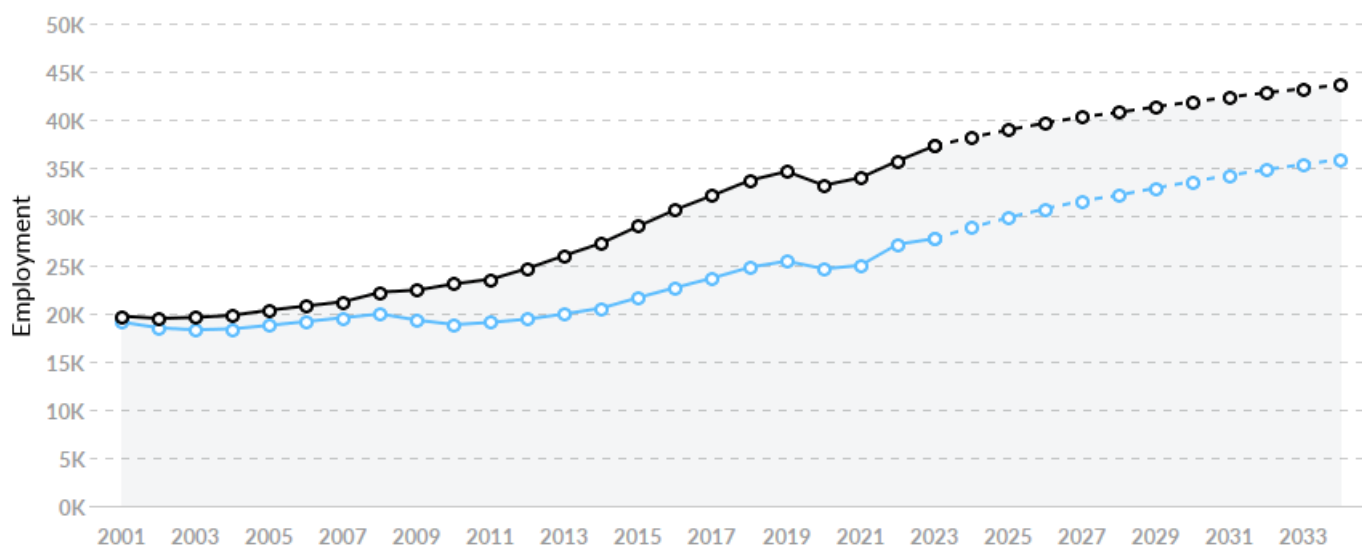
	Region	2023 Jobs	2024 Jobs	Change	% Change
●	San Diego-Chula Vista-Carlsbad, CA	37,306	38,195	889	2.4%
●	National Average	27,693	28,862	1,170	4.2%

*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and San Diego-Chula Vista-Carlsbad, CA. In other words, the values represent the national average adjusted for region size.

Regional Breakdown
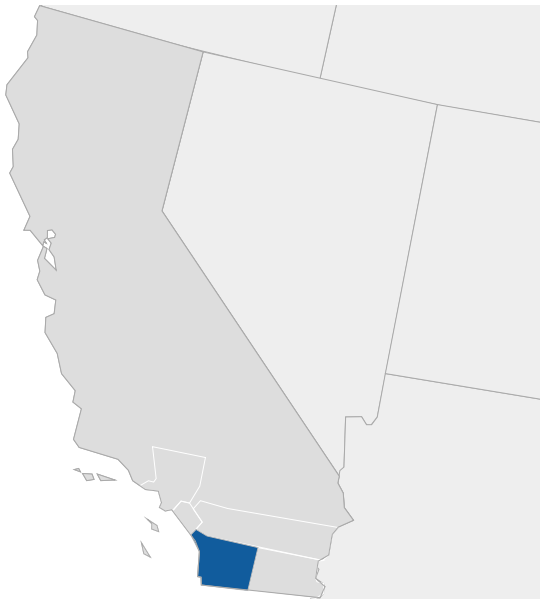
County	2023 Jobs
San Diego County, CA	37,306

Most Jobs are Found in the Computer Systems Design and Related Services Industry Sector

Industry	% of Occupation in Industry (2023)
● Computer Systems Design and Related Services	22.2%
● Scientific Research and Development Services	9.5%
● Federal Government, Civilian	6.9%
● Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	4.9%
● Management of Companies and Enterprises	4.8%
● Software Publishers	4.7%
● Other	47.0%

Compensation

Regional Compensation Is 13% Higher Than National Compensation

For your occupations, the 2023 median wage in San Diego-Chula Vista-Carlsbad, CA is $136,458, while the national median wage is $120,340.
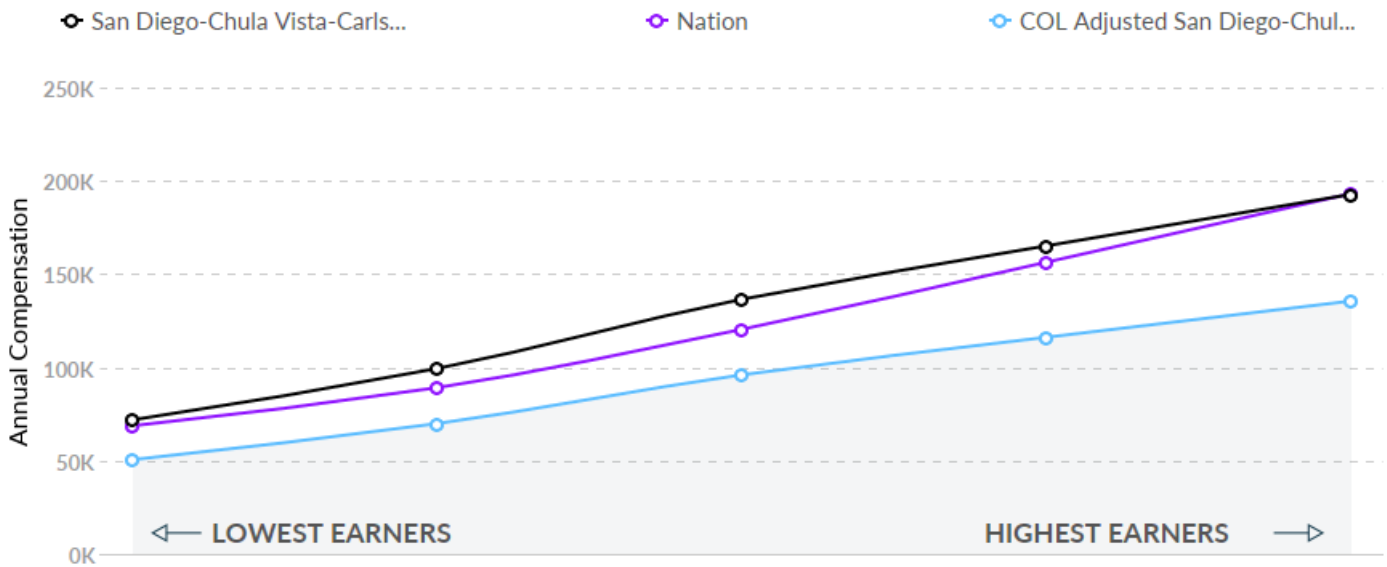
Job Posting Activity

23,553 Unique Job Postings

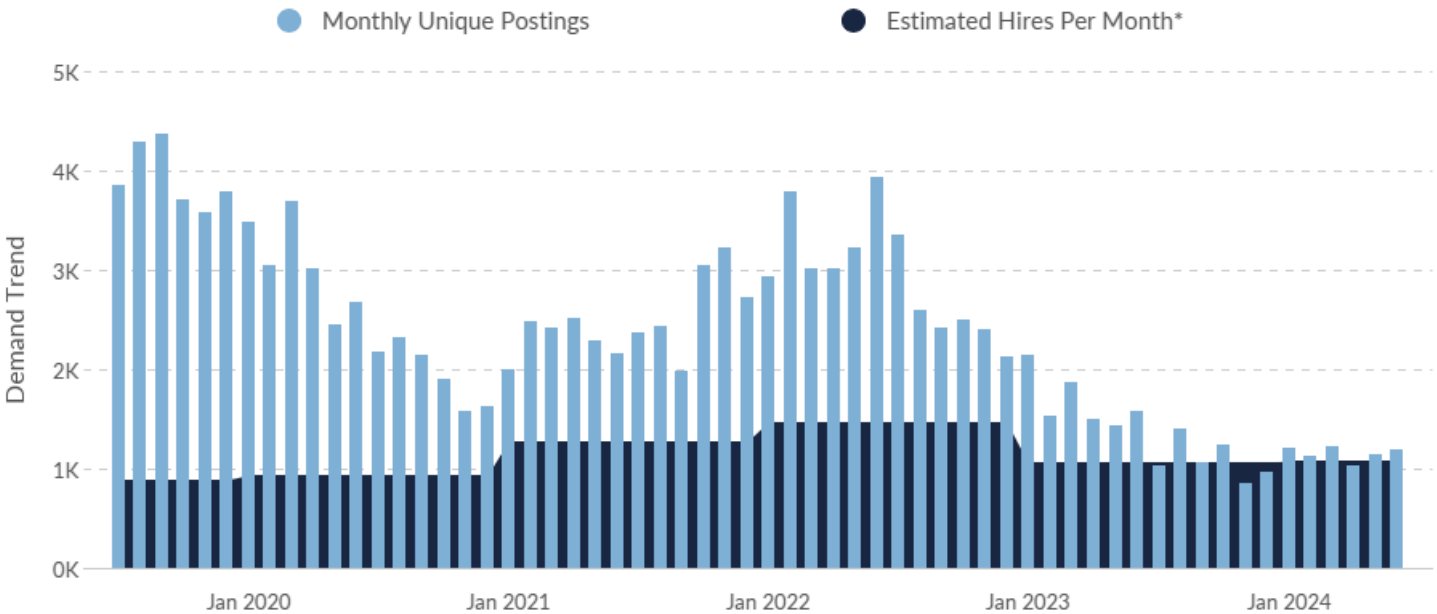The number of unique postings for this job from Jan 2023 to Jun 2024.

3,242 Employers Competing

All employers in the region who posted for this job from Jan 2023 to Jun 2024.

27 Day Median Duration

Posting duration is 1 day shorter than what's typical in the region.

Occupation	Avg Monthly Postings (Jan 2023 - Jun 2024)	Avg Monthly Hires (Jan 2023 - Jun 2024)
Software Developers	598	558
Computer Occupations, All Other	512	274
Computer Systems Analysts	100	125
Database Administrators	63	17
Computer Programmers	35	92

*A hire is reported by the Quarterly Workforce Indicators when an individual's Social Security Number appears on a company's payroll and was not there the quarter before. Lightcast hires are calculated using a combination of Lightcast jobs data, information on separation rates from the Bureau of Labor Statistics (BLS), and industry-based hires data from the Census Bureau.

| Top Companies	Unique Postings		Top Job Titles	Unique Postings	
Apple	1,026		Software Engineers	1,277	
Leidos	644		Systems Engineers	784	
Qualcomm	426		Software Developers	276	
Northrop Grumman	382		Firmware Engineers	253	
CyberCoders	325		DevOps Engineers	241	
Deloitte	324		Business Systems Analysts	236	
Accenture	317		Embedded Software Engineers	236	
General Atomics	308		Principal Software Engineers	233	
Booz Allen Hamilton	297		Data Engineers	225	
BAE Systems	280		Systems Analysts	176	

Top Distinguishing Skills by Demand

An occupation's Distinguishing Skills are the advanced skills that are called for occasionally. An employee with these skills is likely more specialized and able to differentiate themselves from others in the same role.
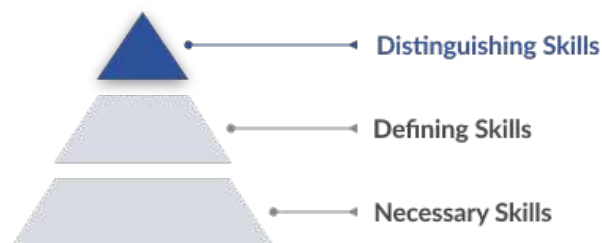
Distinguishing Skills

Defining Skills

Necessary Skills

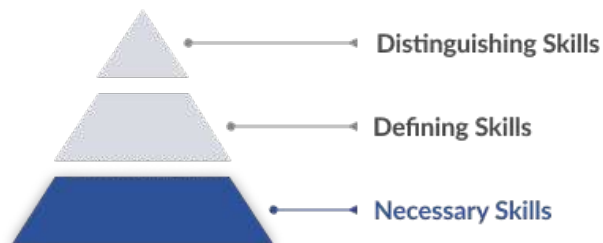| Skill	Salary Boosting	Job Postings Requesting	Projected Growth	Growth Relative to Market
C++ (Programming Language)	✓	3,607	+10.0%	Growing
Systems Engineering	✗	3,493	+20.9%	Rapidly Growing
Secret Clearance	✗	2,357	-1.8%	Lagging
Operating Systems	✗	2,166	+22.6%	Rapidly Growing
DevOps	✗	2,124	+23.7%	Rapidly Growing
CI/CD	✓	1,948	+21.4%	Rapidly Growing
JIRA	✗	1,825	+24.1%	Rapidly Growing
Kubernetes	✓	1,660	+22.0%	Rapidly Growing
Computer Engineering	✓	1,650	+14.7%	Growing
Algorithms	✓	1,645	+23.3%	Rapidly Growing

Top Defining Skills by Demand

An occupation's Defining Skills represent the day-to-day tasks and responsibilities of the job. An employee needs these skills to qualify for and perform successfully in this occupation.
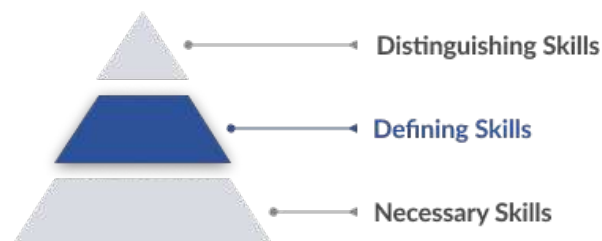
| Skill	Salary Boosting	Job Postings Requesting	Projected Growth	Growth Relative to Market
Computer Science	❌	8,033	+26.8%	Rapidly Growing
Software Engineering	❌	5,519	+23.1%	Rapidly Growing
Python (Programming Language)	❌	5,313	+24.5%	Rapidly Growing
Software Development	❌	5,022	+23.2%	Rapidly Growing
Agile Methodology	✅	4,992	+19.8%	Rapidly Growing
Automation	❌	3,739	+30.5%	Rapidly Growing
C++ (Programming Language)	✅	3,607	+10.0%	Growing
SQL (Programming Language)	❌	3,552	+6.4%	Stable
Project Management	❌	3,521	+19.8%	Rapidly Growing
Systems Engineering	❌	3,493	+20.9%	Rapidly Growing

Top Necessary Skills by Demand

An occupation's Necessary Skills are the specialized skills required for that job and relevant across other similar jobs. An employee needs these skills as building blocks to perform the more complex Defining Skills.

Distinguishing Skills

Defining Skills

Necessary Skills

| Skill	Salary Boosting	Job Postings Requesting	Projected Growth	Growth Relative to Market
Python (Programming Language)	❌	5,313	+24.5%	Rapidly Growing
Software Development	❌	5,022	+23.2%	Rapidly Growing
Agile Methodology	✅	4,992	+19.8%	Rapidly Growing
Automation	❌	3,739	+30.5%	Rapidly Growing
C++ (Programming Language)	✅	3,607	+10.0%	Growing
SQL (Programming Language)	❌	3,552	+6.4%	Stable
Project Management	❌	3,521	+19.8%	Rapidly Growing
Java (Programming Language)	❌	3,490	+17.4%	Growing
Debugging	❌	3,139	+19.5%	Rapidly Growing
Linux	❌	3,088	+8.9%	Growing

Demographics

Retirement Risk Is About Average, While Overall Diversity Is High
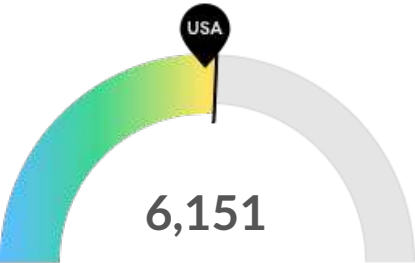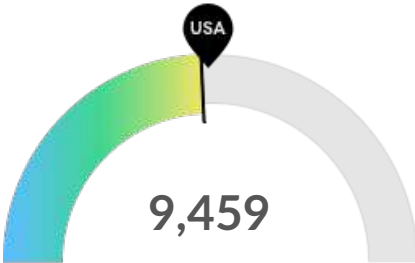
6,151
Retiring Soon

Retirement risk is about average in San Diego-Chula Vista-Carlsbad, CA. The national average for an area this size is 5,894* employees 55 or older, while there are 6,151 here.
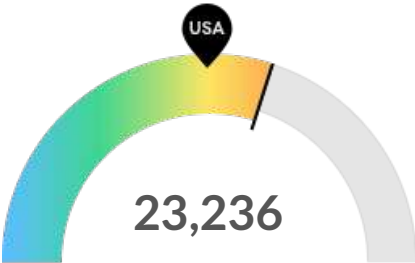
23,236
Racial Diversity

Racial diversity is high in San Diego-Chula Vista-Carlsbad, CA. The national average for an area this size is 17,615* racially diverse employees, while there are 23,236 here.
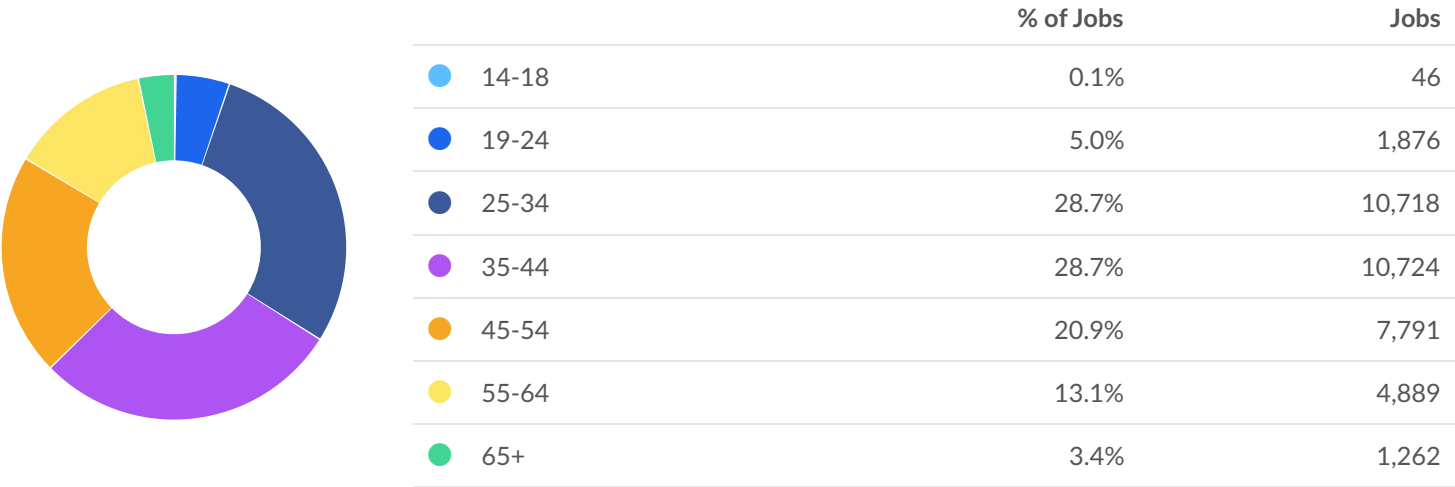
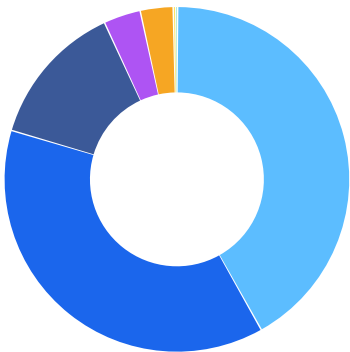### 9,459
Gender Diversity

Gender diversity is about average in San Diego-Chula Vista-Carlsbad, CA. The national average for an area this size is 9,856* female employees, while there are 9,459 here.

*National average values are derived by taking the national value for your occupations and scaling it down to account for the difference in overall workforce size between the nation and San Diego-Chula Vista-Carlsbad, CA. In other words, the values represent the national average adjusted for region size.

Occupation Age Breakdown

	% of Jobs	Jobs
14-18	0.1%	46
19-24	5.0%	1,876
25-34	28.7%	10,718
35-44	28.7%	10,724
45-54	20.9%	7,791
55-64	13.1%	4,889
65+	3.4%	1,262

Occupation Race/Ethnicity Breakdown

	% of Jobs	Jobs
● Asian	41.8%	15,591
● White	37.7%	14,071
● Hispanic or Latino	13.5%	5,047
● Black or African American	3.5%	1,295
● Two or More Races	3.1%	1,147
● Native Hawaiian or Other Pacific Islander	0.2%	90
● American Indian or Alaska Native	0.2%	66

Occupation Gender Breakdown
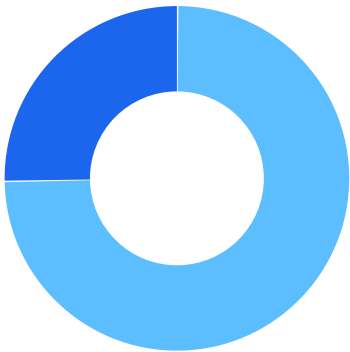
	% of Jobs	Jobs
● Males	74.6%	27,847
● Females	25.4%	9,459

Occupational Programs

59 Programs

Of the programs that can train for this job, 59 have produced completions in the last 5 years.

6,817 Completions (2023)

The completions from all regional institutions for all degree types.

3,028 Openings (2023)

The average number of openings for an occupation in the region is 256.

CIP Code	Top Programs	Completions (2023)	
11.0701	Computer Science	1,867	
11.0103	Information Technology	420	
11.1003	Computer and Information Systems Security/Auditing/Infor...	391	
14.0901	Computer Engineering, General	385	
52.1399	Management Sciences and Quantitative Methods, Other	356	
30.0801	Mathematics and Computer Science	288	
03.0103	Environmental Studies	226	
15.1202	Computer/Computer Systems Technology/Technician	189	
52.1201	Management Information Systems, General	180	
52.1101	International Business/Trade/Commerce	165	

Top Schools	Completions (2023)	
University of California-San Diego	2,465	
Ashford University	739	
San Diego State University	717	
University of San Diego	499	
California State University-San Marcos	273	
National University	268	
MiraCosta College	247	
Grossmont College	228	
San Diego Mesa College	211	
Palomar College	199	

Appendix A - Data Sources and Calculations

Location Quotient

Location quotient (LQ) is a way of quantifying how concentrated a particular industry, cluster, occupation, or demographic group is in a region as compared to the nation. It can reveal what makes a particular region unique in comparison to the national average.

Occupation Data

Emsi occupation employment data are based on final Emsi industry data and final Emsi staffing patterns. Wage estimates are based on Occupational Employment Statistics (QCEW and Non-QCEW Employees classes of worker) and the American Community Survey (Self-Employed and Extended Proprietors). Occupational wage estimates are also affected by county-level Emsi earnings by industry.

Staffing Patterns Data

The staffing pattern data in this report are compiled from several sources using a specialized process. For QCEW and Non-QCEW Employees classes of worker, sources include Occupational Employment Statistics, the National Industry-Occupation Employment Matrix, and the American Community Survey. For the Self-Employed and Extended Proprietors classes of worker, the primary source is the American Community Survey, with a small amount of information from Occupational Employment Statistics.

Cost of Living Data

Lightcast's cost of living data is based on the Cost of Living Index published by the Council for Community and Economic Research (C2ER).

Lightcast Job Postings

Job postings are collected from various sources and processed/enriched to provide information such as standardized company name, occupation, skills, and geography.

Institution Data

The institution data in this report is taken directly from the national IPEDS database published by the U.S. Department of Education's National Center for Education Statistics.