Engineering Occupations
in San Diego-Chula Vista-Carlsbad, CA

Contents

What is Emsi Data?

Emsi 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.

Emsi 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

4 Occupations

17-2051	Civil Engineers	17-2141	Mechanical Engineers
17-2071	Electrical Engineers	17-2011	Aerospace Engineers

1 MSA

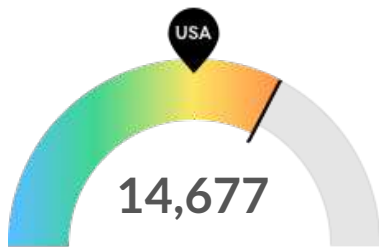| 41740	San Diego-Chula Vista-Carlsbad, CA

Class of Worker

QCEW Employees, Non-QCEW Employees, and Self-Employed

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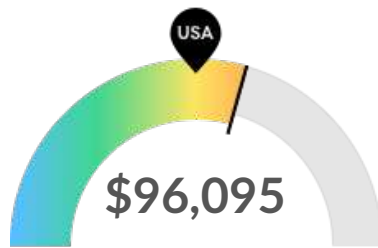
Executive Summary

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

14,677

Jobs (2018)

San Diego-Chula Vista-Carlsbad, CA is a hotspot for this kind of job. The national average for an area this size is 9,597* employees, while there are 14,677 here.

$96,095

Compensation

Earnings are about average in San Diego-Chula Vista-Carlsbad, CA. The national median salary for your occupations is $90,966, compared to $96,095 here.

### 602
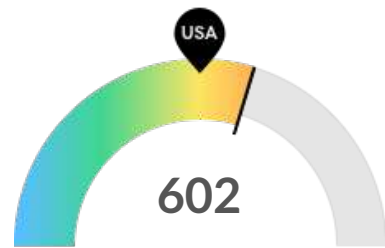
Job Posting Demand

Job posting activity is high in San Diego-Chula Vista-Carlsbad, CA. The national average for an area this size is 462* job postings/mo, while there are 602 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 9,597* jobs, while there are 14,677 here. This higher than average supply of jobs may make it easier for workers in this field to find employment in your area.
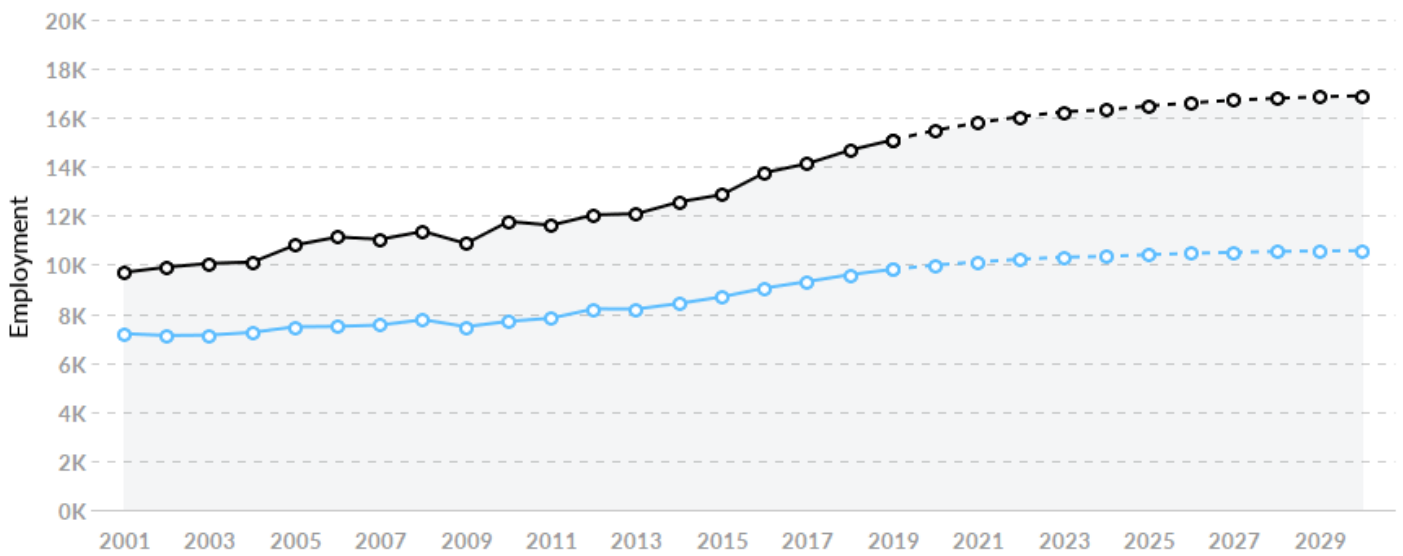
|	Region	2018 Jobs	2028 Jobs	Change	% Change
●	San Diego-Chula Vista-Carlsbad, CA	14,677	16,794	2,117	14.4%
●	National Average	9,597	10,542	945	9.8%

*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	2018 Jobs
San Diego County, CA	14,677

## Most Jobs are Found in the Architectural, Engineering, and Related Services Industry Sector
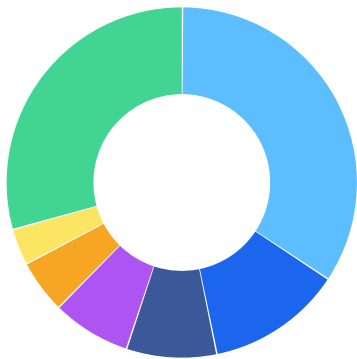
Industry	% of Occupation in Industry (2018)
Architectural, Engineering, and Related Services	34.2%
Scientific Research and Development Services	12.5%
Aerospace Product and Parts Manufacturing	8.3%
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	7.3%
Federal Government, Civilian	4.9%
Local Government, Excluding Education and Hospitals	3.4%
Other	29.4%

Compensation

Regional Compensation Is 6% Higher Than National Compensation

For your occupations, the 2018 median wage in San Diego-Chula Vista-Carlsbad, CA is $96,095, while the national median wage is $90,966.
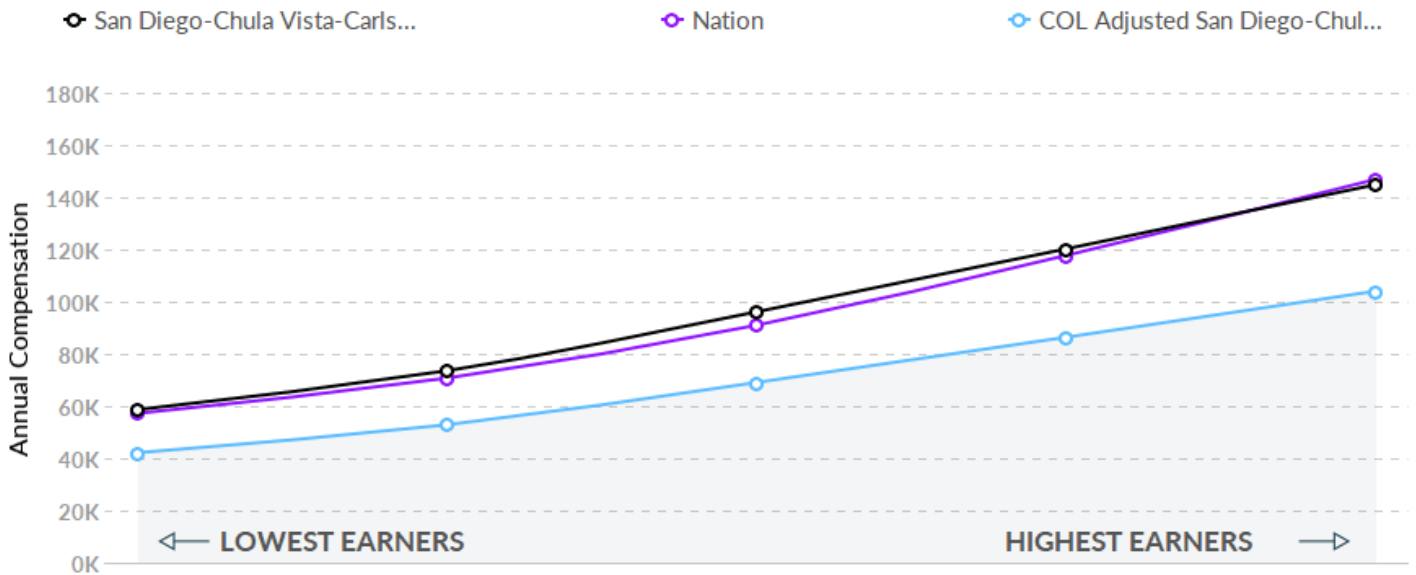
Job Posting Activity

17,446 Unique Job Postings

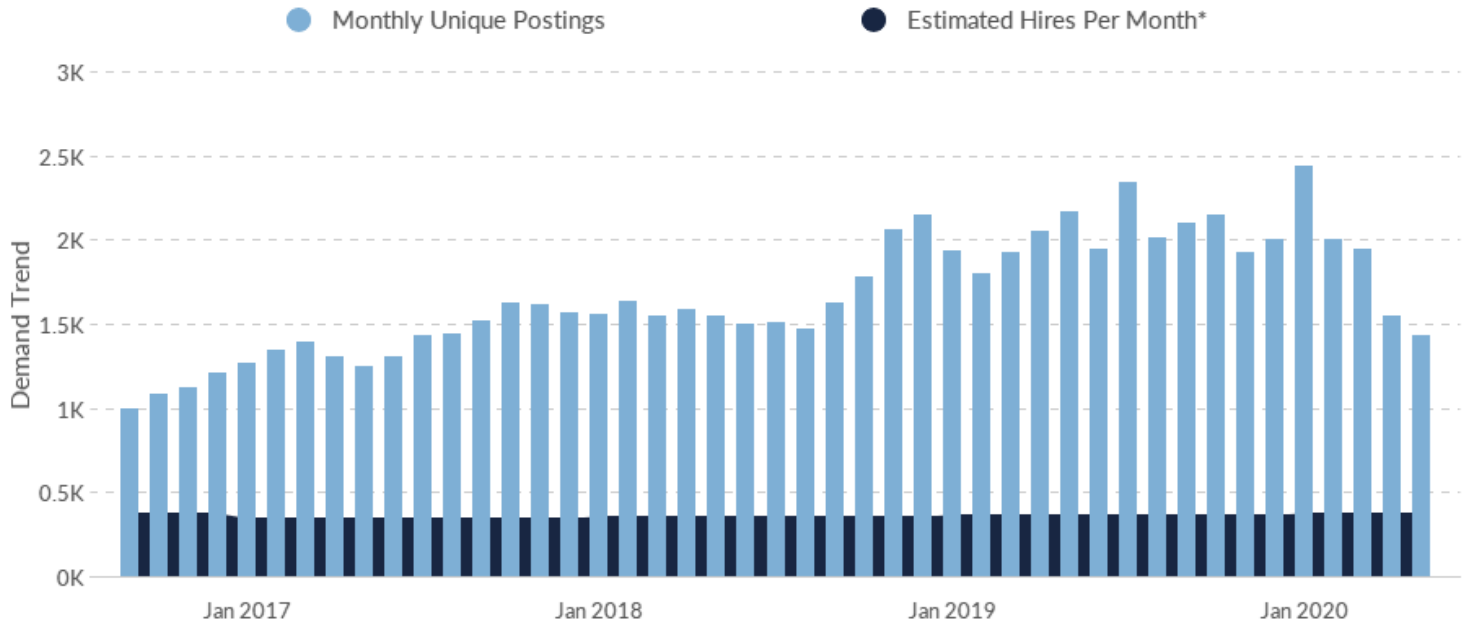The number of unique postings for this job from Jan 2018 to May 2020.

2,420 Employers Competing

All employers in the region who posted for this job from Jan 2018 to May 2020.

43 Day Median Duration

Posting duration is 10 days longer than what's typical in the region.

● Monthly Unique Postings   ● Estimated Hires Per Month*

Occupation	Avg Monthly Postings (Jan 2018 - May 2020)	Avg Monthly Hires (Jan 2018 - May 2020)
Mechanical Engineers	646	92
Electrical Engineers	671	81
Civil Engineers	397	157
Aerospace Engineers	137	35

*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. Emsi hires are calculated using a combination of Emsi 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	
General Atomics	973	▬	Design Engineers (Architecture ...	2,121	▬
Northrop Grumman Corporation	842	▬	Mechanical Engineers	1,669	▬
Qualcomm Incorporated	680	▬	Project Engineers (Architecture ...	926	▬
CyberCoders, Inc.	499	▬	Civil Engineers	804	▬
Growing People and Companies	260	▪	Senior Electrical Engineers	750	▬
Aerotek, Inc.	206	▪	Systems Engineers (Architecture...	573	▪
Asml Us, Inc.	193	▪	Field Engineers (Architecture an...	528	▪
Viasat, Inc.	167	▪	Structural Engineers	465	▪
Kforce Inc.	154	▪	Quality Assurance Engineers (Ar...	393	▪
Apple Inc.	134	▪	Service Engineers	261	▪

Top Hard Skills

● Frequency in Job Postings   ● Frequency in Profiles
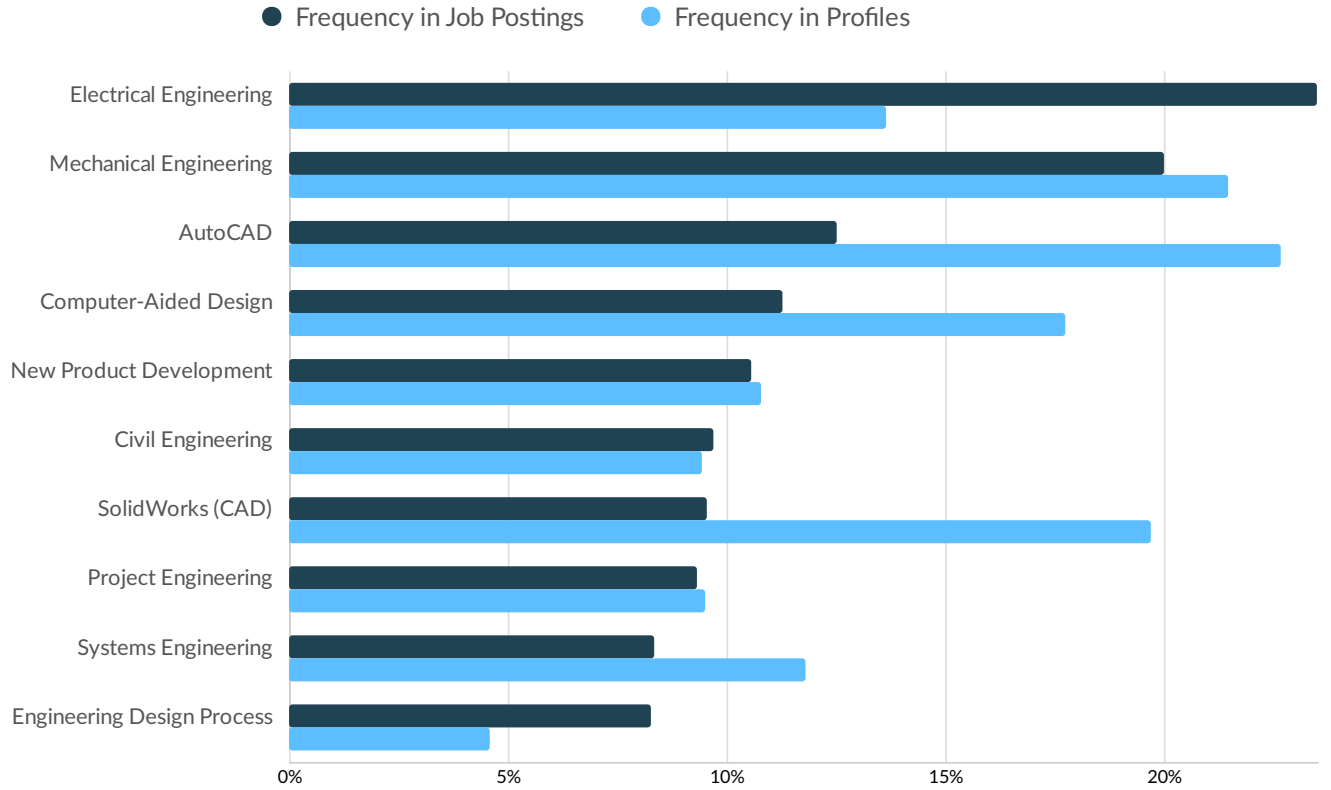
Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Electrical Engineering	5,479	23%	2,095	14%
Mechanical Engineering	4,666	20%	3,294	21%
AutoCAD	2,922	13%	3,483	23%
Computer-Aided Design	2,631	11%	2,726	18%
New Product Development	2,459	11%	1,655	11%
Civil Engineering	2,265	10%	1,448	9%
SolidWorks (CAD)	2,224	10%	3,024	20%
Project Engineering	2,176	9%	1,462	10%
Systems Engineering	1,944	8%	1,813	12%
Engineering Design Process	1,928	8%	705	5%

Top Common Skills

● Frequency in Job Postings   ● Frequency in Profiles
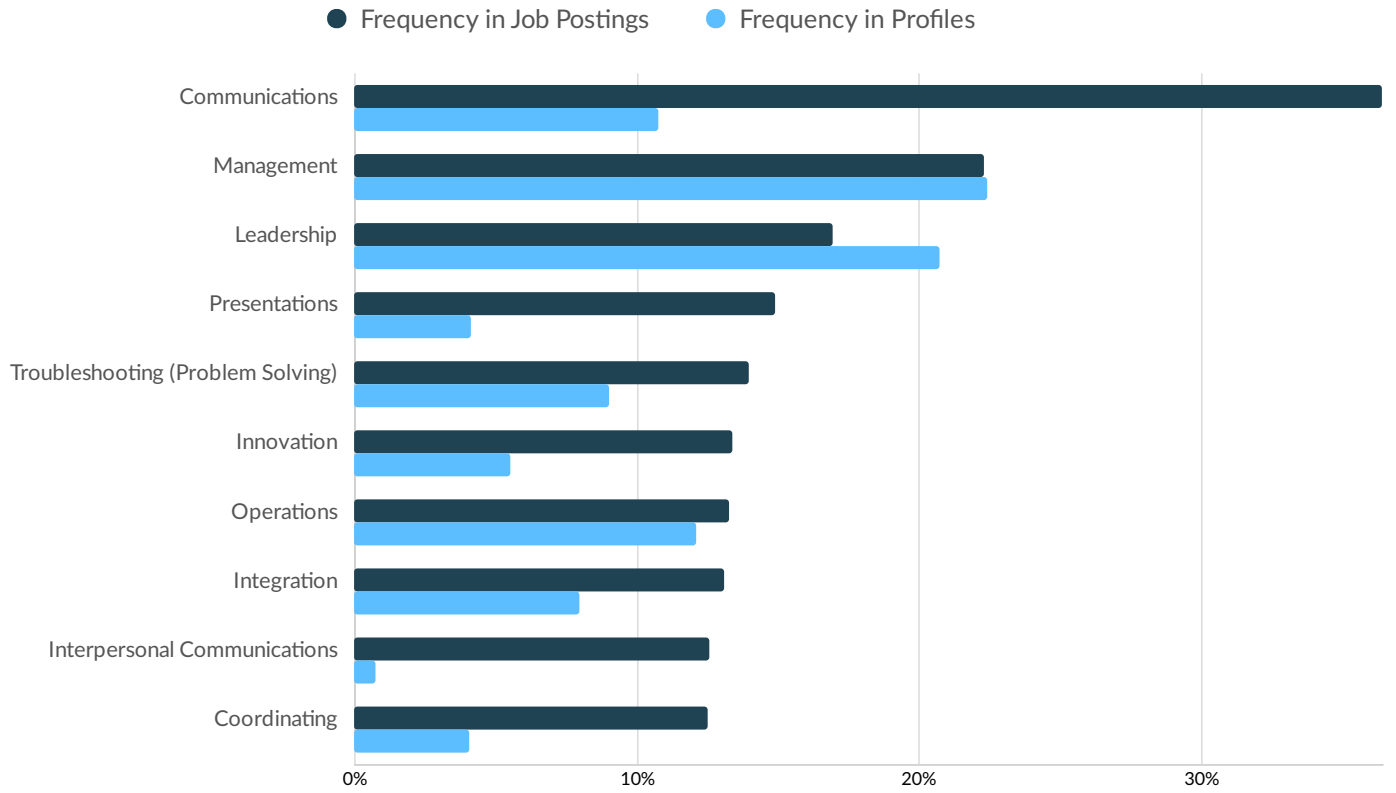
Skills	Postings	% of Total Postings	Profiles	% of Total Profiles
Communications	8,495	36%	1,654	11%
Management	5,199	22%	3,442	22%
Leadership	3,952	17%	3,184	21%
Presentations	3,484	15%	636	4%
Troubleshooting (Problem Solving)	3,258	14%	1,387	9%
Innovation	3,130	13%	848	6%
Operations	3,098	13%	1,863	12%
Integration	3,057	13%	1,226	8%
Interpersonal Communications	2,941	13%	116	1%
Coordinating	2,929	13%	629	4%

Demographics

Retirement Risk Is About Average, While Overall Diversity Is High
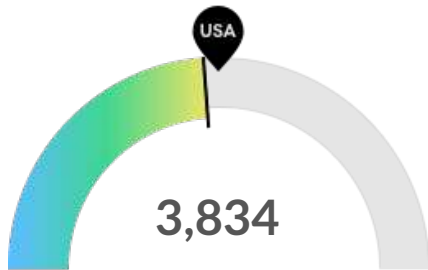
3,834

Retiring Soon

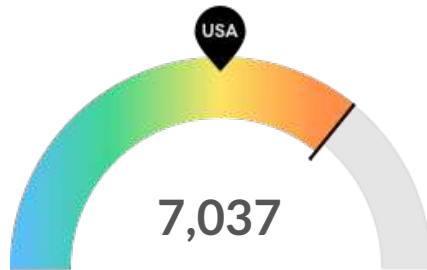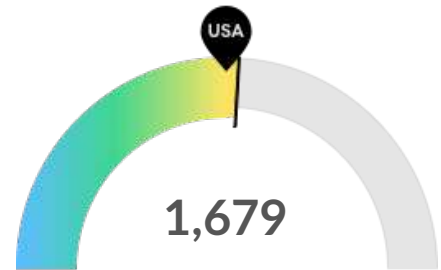Retirement risk is about average in San Diego-Chula Vista-Carlsbad, CA. The national average for an area this size is 4,101* employees 55 or older, while there are 3,834 here.

7,037

Racial Diversity

Racial diversity is high in San Diego-Chula Vista-Carlsbad, CA. The national average for an area this size is 3,849* racially diverse employees, while there are 7,037 here.

1,679

Gender Diversity

Gender diversity is about average in San Diego-Chula Vista-Carlsbad, CA. The national average for an area this size is 1,591* female employees, while there are 1,679 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	0.0%	7
19-24	4.7%	708
25-34	24.5%	3,699
35-44	23.2%	3,506
45-54	22.1%	3,339
55-64	19.2%	2,903
65+	6.2%	931
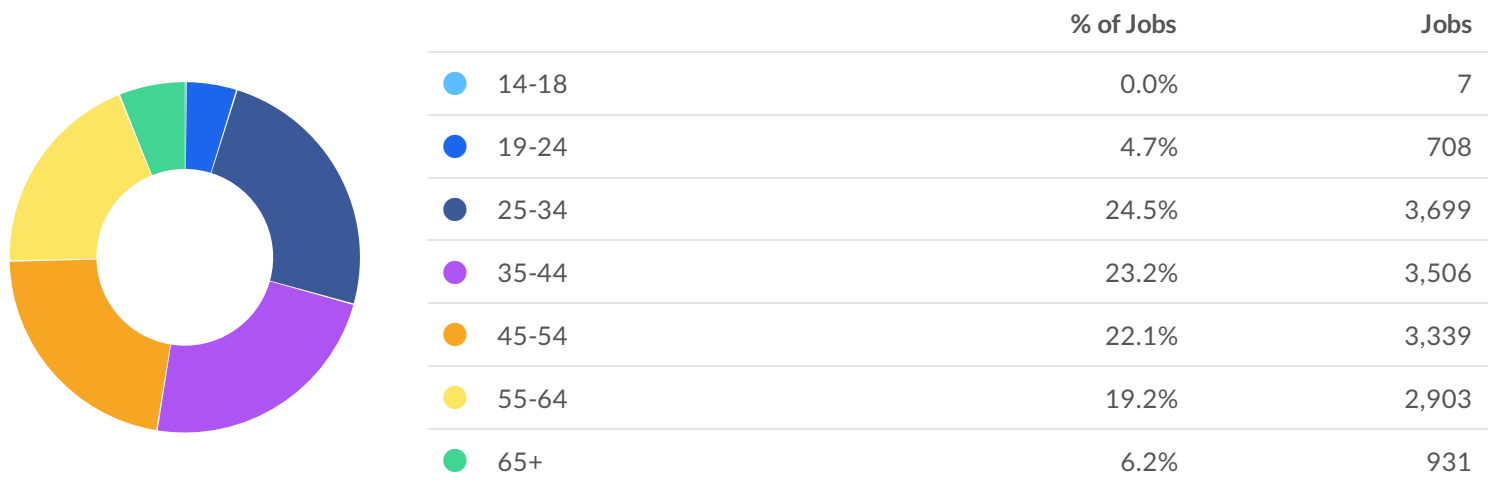
Occupation Race/Ethnicity Breakdown
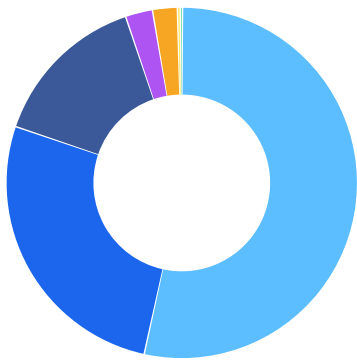
	% of Jobs	Jobs
● White	53.4%	8,056
● Asian	26.8%	4,039
● Hispanic or Latino	14.6%	2,205
● Black or African American	2.5%	378
● Two or More Races	2.3%	344
● Native Hawaiian or Other Pacific Islander	0.3%	41
● American Indian or Alaska Native	0.2%	31

Occupation Gender Breakdown
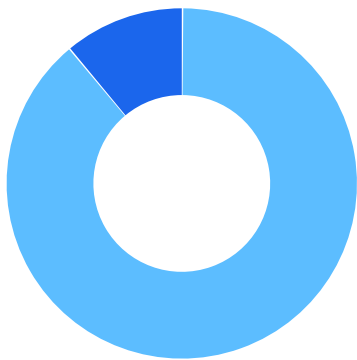
	% of Jobs	Jobs
● Males	88.9%	13,414
● Females	11.1%	1,679

Occupational Programs

6 Programs

Of the programs that can train for this job, 6 have produced completions in the last 5 years.

1,644 Completions (2018)

The completions from all regional institutions for all degree types.

1,454 Openings (2018)

The average number of openings for an occupation in the region is 288.

CIP Code	Top Programs	Completions (2018)	
14.1901	Mechanical Engineering	600	
14.1001	Electrical and Electronics Engineering	519	
14.0803	Structural Engineering	209	
14.0201	Aerospace, Aeronautical and Astronautical/Space Engineeri...	155	
14.0801	Civil Engineering, General	150	
14.3301	Construction Engineering	11	

Top Schools	Completions (2018)	
University of California-San Diego	819	
San Diego State University	693	
University of San Diego	106	
National University	26	

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 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

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

Emsi 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.