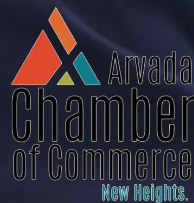# Manufacturing Engineers*
## in Jefferson County, CO

*Job titles used in government data sources are slightly different from the one you've chosen. This report uses data from the closest matching official classifications (listed below) as a proxy for Manufacturing Engineers data.

Industrial Engineers

Arvada Chamber of Commerce
New Heights.

Colorado

# 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

## 1 Job Title

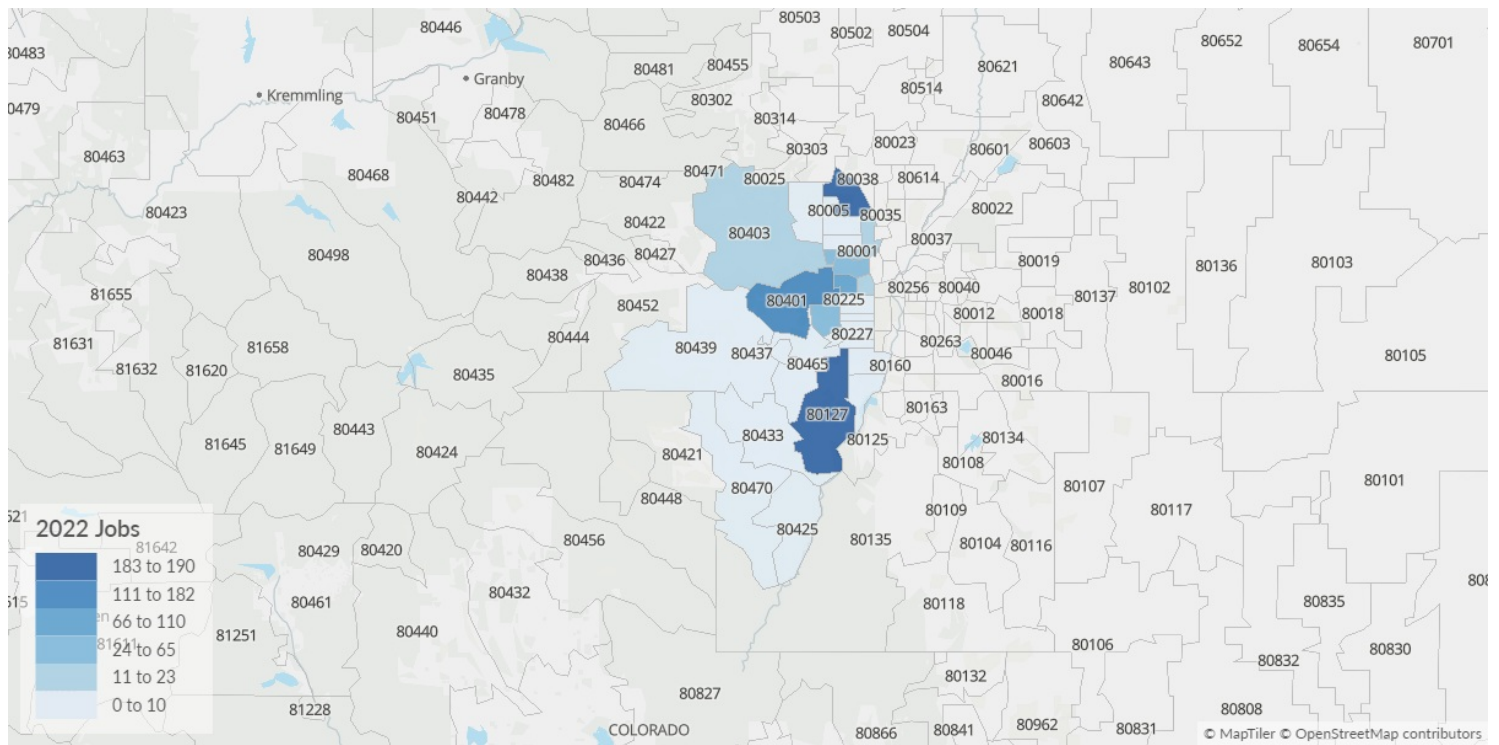Manufacturing Engineers

## 1 County

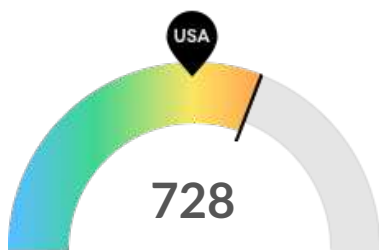8059        Jefferson County, CO

## Class of Worker

QCEW Employees

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

# Workforce Map

# Executive Summary

## Aggressive Hiring Competition Over a Deep Supply of Regional Talent

**728**

**Supply (Jobs)**

Jefferson County, CO is a hotspot for this kind of talent. The national average for an area this size is 524* employees, while there are 728 here.

**$98,868**

**Compensation**

The cost for talent is about average in Jefferson County, CO. The national median salary for Manufacturing Engineers is $96,346, while you'll pay $98,868 here.

**26**
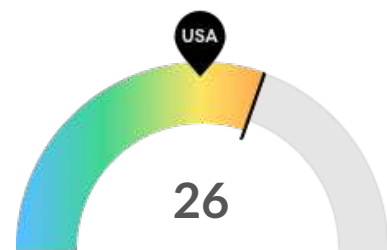
**Demand (Job Postings)**

Competition from online job postings is high in Jefferson County, CO. The national average for an area this size is 19* job postings/mo, while there are 26 here.

*National average values are derived by taking the national value for Manufacturing Engineers and scaling it down to account for the difference in overall workforce size between the nation and Jefferson County, CO. In other words, the values represent the national average adjusted for region size.

# Supply (Jobs)

## Supply Is Higher Than the National Average

The regional vs. national average employment helps you understand if the supply of Manufacturing Engineers is a strength or weakness for Jefferson County, CO, and how it is changing relative to the nation. An average area of this size would have 524* employees, while there are 728 here. This higher than expected supply may make it easier to find candidates. The gap between expected and actual employment is expected to remain roughly the same over the next 5 years.
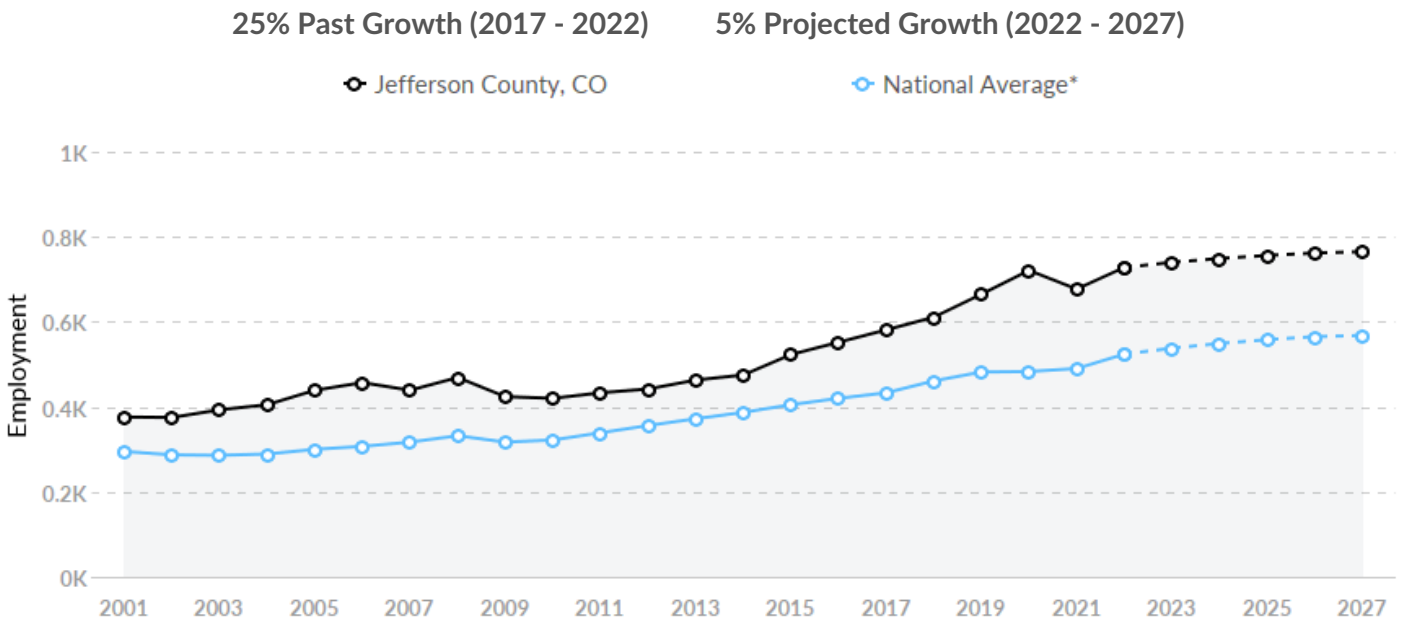
### 25% Past Growth (2017 - 2022)    5% Projected Growth (2022 - 2027)

● Jefferson County, CO          ○ National Average*



*National average values are derived by taking the national value for Manufacturing Engineers and scaling it down to account for the difference in overall workforce size between the nation and Jefferson County, CO. In other words, the values represent the national average adjusted for region size.
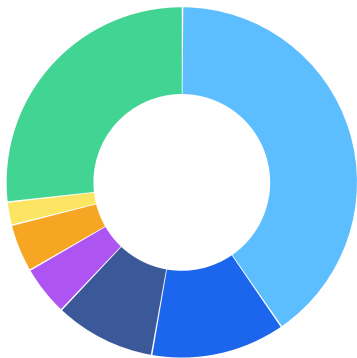
## Most Jobs are Found in the Aerospace Product and Parts Manufacturing Industry Sector

| Industry | % of Occupation in Industry (2022) |
|---|---|
| ● Aerospace Product and Parts Manufacturing | 40.3% |
| ● Medical Equipment and Supplies Manufacturing | 12.4% |
| ● Architectural, Engineering, and Related Services | 9.3% |
| ● Navigational, Measuring, Electromedical, and Control Instruments Manufacturing | 4.6% |
| ● Scientific Research and Development Services | 4.4% |
| ● Management of Companies and Enterprises | 2.1% |
| ● Other | 26.9% |

# Place of Work vs Place of Residence

Understanding where talent in Jefferson County, CO currently works compared to where talent lives can help you optimize site decisions.
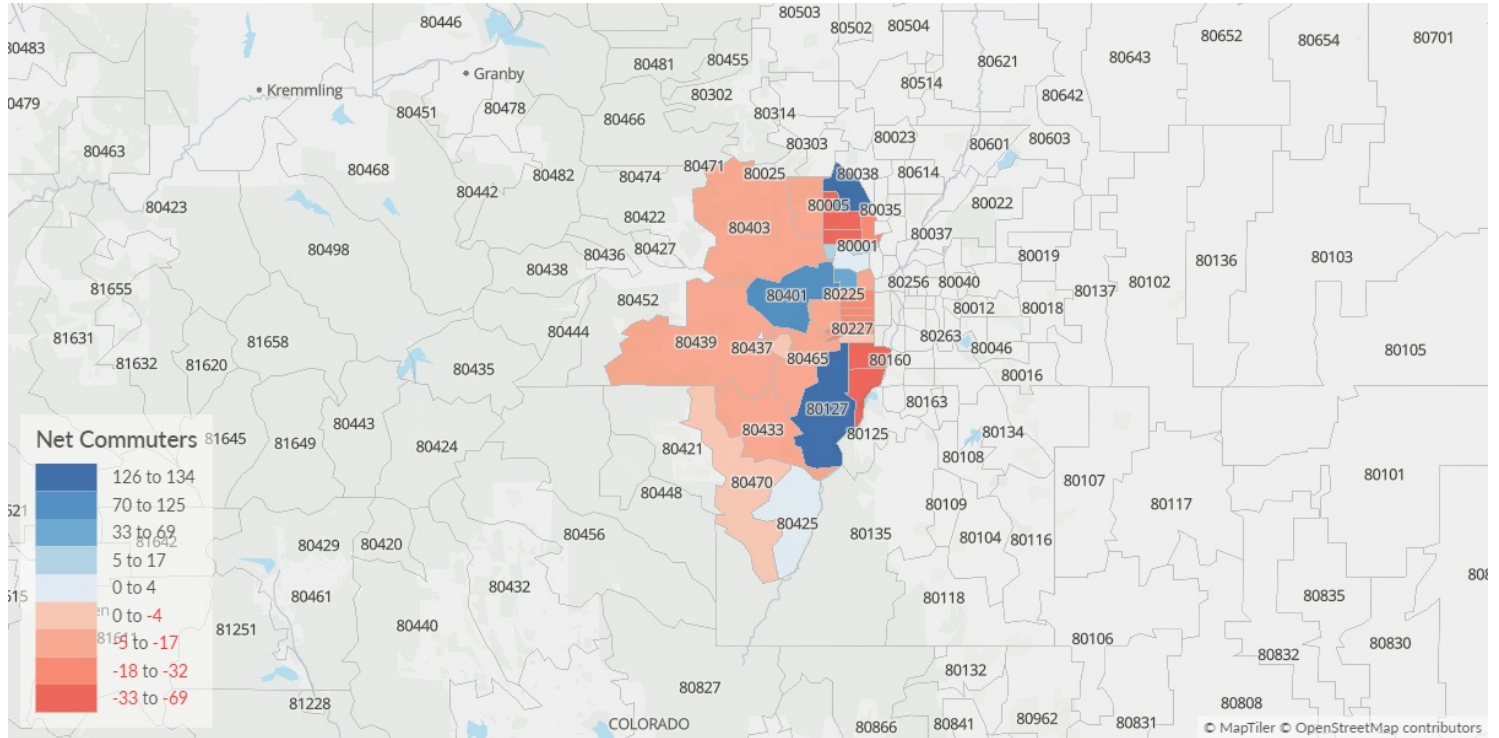


### Where Talent Works

| ZIP | Name | 2022 Employment |
|---|---|---|
| 80021 | Broomfield, CO (in Jeffe... | 190 |
| 80127 | Littleton, CO (in Jefferso... | 183 |
| 80401 | Golden, CO (in Jefferso... | 111 |
| 80215 | Denver, CO (in Jefferso... | 66 |
| 80002 | Arvada, CO (in Jefferson... | 30 |

### Where Talent Lives

| ZIP | Name | 2022 Workers |
|---|---|---|
| 80021 | Broomfield, CO (in Jeffe... | 65 |
| 80127 | Littleton, CO (in Jefferso... | 49 |
| 80123 | Littleton, CO (in Jefferso... | 42 |
| 80401 | Golden, CO (in Jefferso... | 42 |
| 80004 | Arvada, CO (in Jefferson... | 41 |

## Retirement Risk Is About Average, While Overall Diversity Is Low

**193**
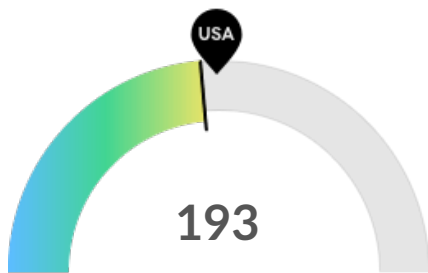
### Retiring Soon

Retirement risk is about average in Jefferson County, CO. The national average for an area this size is 210* employees 55 or older, while there are 193 here.

**140**
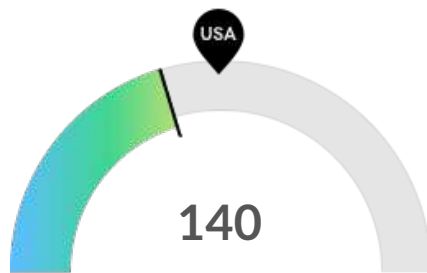
### Racial Diversity

Racial diversity is low in Jefferson County, CO. The national average for an area this size is 185* racially diverse employees, while there are 140 here.

**152**
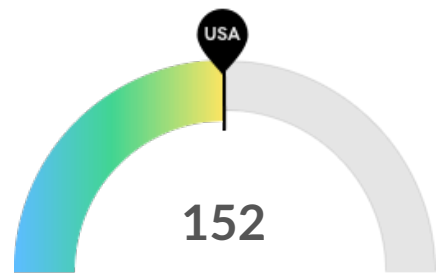
### Gender Diversity

Gender diversity is about average in Jefferson County, CO. The national average for an area this size is 152* female employees, while there are 152 here.

*National average values are derived by taking the national value for Manufacturing Engineers and scaling it down to account for the difference in overall workforce size between the nation and Jefferson County, CO. In other words, the values represent the national average adjusted for region size.

# Demographic Details

## Occupation Age Breakdown
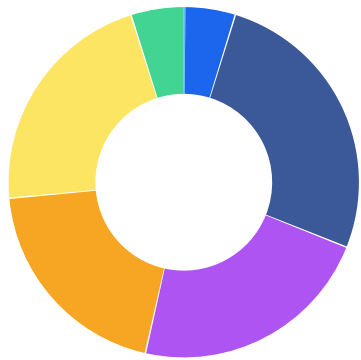
| | % of Jobs | Jobs |
|---|---|---|
| 14-18 | 0.0% | 0 |
| 19-24 | 4.7% | 34 |
| 25-34 | 26.3% | 191 |
| 35-44 | 22.5% | 164 |
| 45-54 | 20.0% | 146 |
| 55-64 | 21.6% | 157 |
| 65+ | 4.9% | 36 |

## Occupation Race/Ethnicity Breakdown
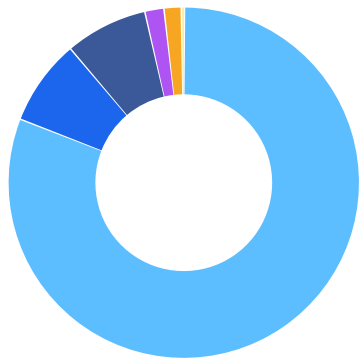
| | % of Jobs | Jobs |
|---|---|---|
| White | 80.8% | 589 |
| Asian | 7.9% | 58 |
| Hispanic or Latino | 7.6% | 55 |
| Two or More Races | 1.8% | 13 |
| Black or African American | 1.6% | 12 |
| American Indian or Alaska Native | 0.2% | 1 |
| Native Hawaiian or Other Pacific Islander | 0.1% | 1 |

## Occupation Gender Breakdown
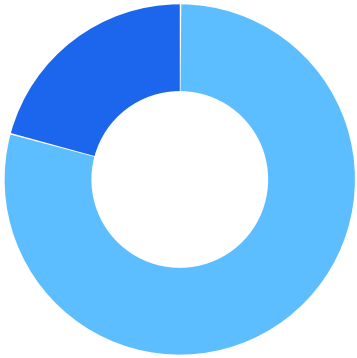
| | % of Jobs | Jobs |
|---|---|---|
| Males | 79.1% | 576 |
| Females | 20.9% | 152 |

## National Educational Attainment
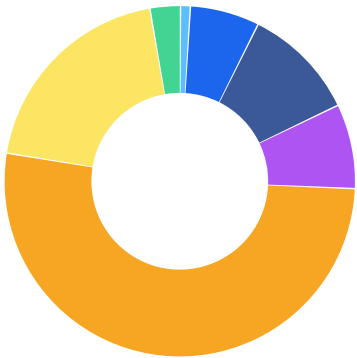
| | % of Jobs |
|---|---|
| Less than high school diploma | 0.9% |
| High school diploma or equivalent | 6.4% |
| Some college, no degree | 10.5% |
| Associate's degree | 7.8% |
| Bachelor's degree | 51.9% |
| Master's degree | 19.7% |
| Doctoral or professional degree | 2.8% |

# Compensation

## Talent Is 3% More Expensive, While the Cost of Living May Make Attraction Difficult

In 2022, the median compensation for Manufacturing Engineers in Jefferson County, CO is $98,868. Based on the national median wage of $96,346 for this position, this means you will spend about 3% more to employ Manufacturing Engineers here. However, their actual purchasing power will be 11% less than the national median when we adjust for regional cost of living (which is 15% higher than average). This may make it harder to attract talent to the region at this price.
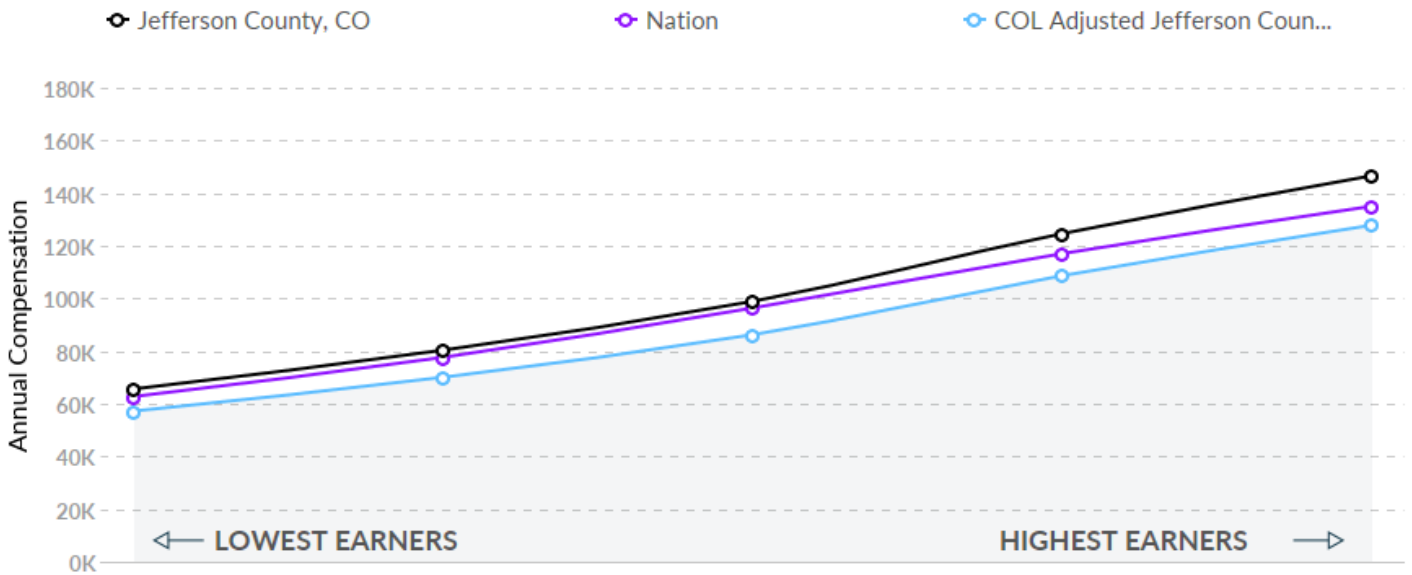
# Demand

**132 Employers Competing**

All employers in the region who posted for this job over the last 12 months.

**315 Unique Job Postings**

The number of unique postings for this job over the last 12 months.

**27 Day Median Duration**

Posting duration is 3 days shorter than what's typical in the region.



● Monthly Unique Postings          ● Estimated Hires Per Month*
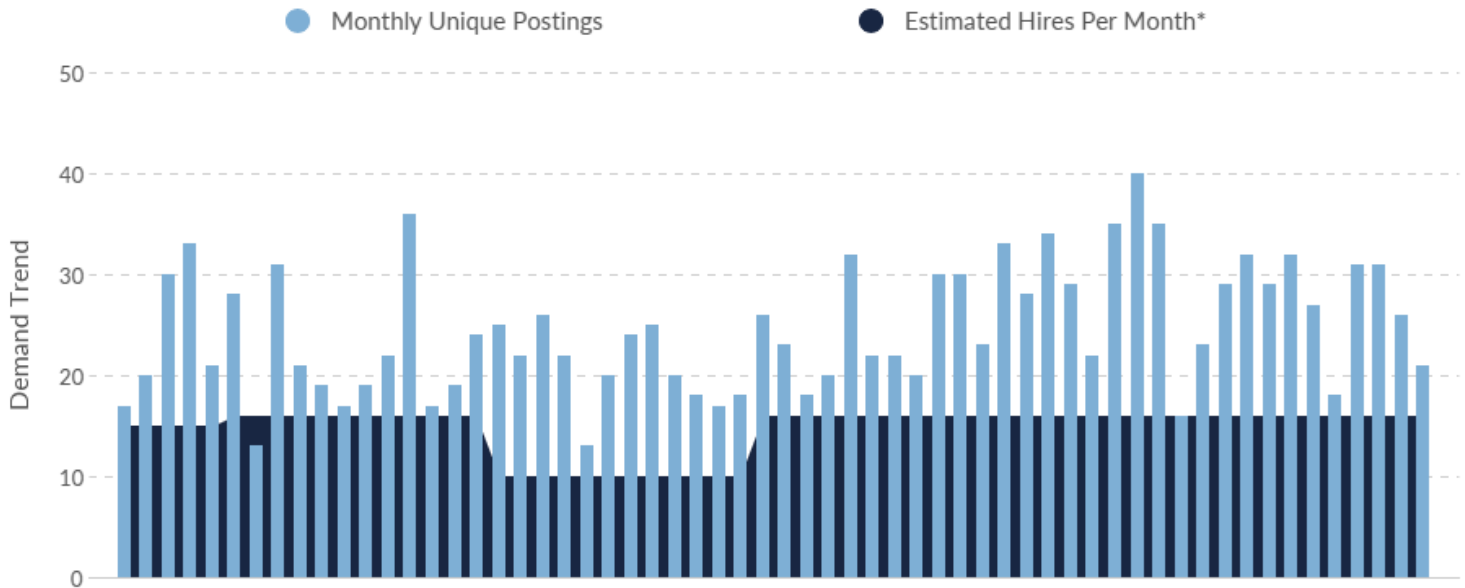
| Occupation | Avg Monthly Postings (Aug 2022 - Jul 2023) | Avg Monthly Hires (Aug 2022 - Jul 2023) |
|---|---|---|
| Industrial Engineers | 26 | 16 |

*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 | |
|---|---|---|---|---|---|
| Terumo BCT | 39 | | Manufacturing Engineers | 41 | |
| Lockheed Martin | 34 | | Quality Engineers | 35 | |
| Molson Coors | 14 | | Supplier Quality Engineers | 28 | |
| Connecting Colorado | 13 | | Site Reliability Engineers | 22 | |
| Actalent | 7 | | Industrial Engineers | 11 | |

## 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.
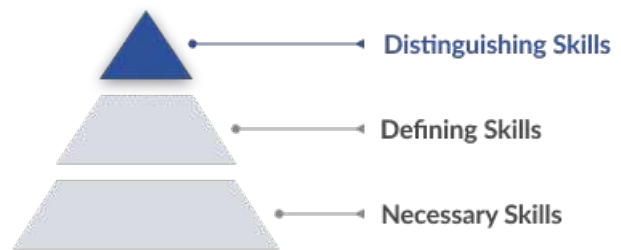


| Skill | Salary Boosting | Job Postings Requesting |
|---|---|---|
| Process Validation | ✖ | 325 |
| Qualification Protocols (IQ/OQ/PQ) | ✖ | 231 |
| Supplier Quality Management | ✖ | 201 |
| Failure Mode And Effects Analysis | ✔ | 199 |
| ISO 13485 Standard | ✖ | 190 |
| Supplier Quality Engineering | ✔ | 185 |
| Certified Quality Engineer | ✖ | 180 |
| SolidWorks (CAD) | ✖ | 174 |
| Production Engineering | ✔ | 132 |
| Lean Six Sigma | ✖ | 126 |

## 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.

Distinguishing Skills

Defining Skills

Necessary Skills
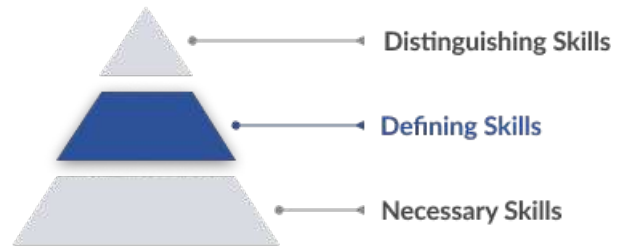
| Skill | Salary Boosting | Job Postings Requesting |
|---|---|---|
| Project Management | ❌ | 1,009 |
| Manufacturing Processes | ❌ | 701 |
| Quality Management Systems | ❌ | 577 |
| Lean Manufacturing | ❌ | 521 |
| Continuous Improvement Process | ❌ | 472 |
| Corrective And Preventive Action (CAPA) | ❌ | 384 |
| Manufacturing Engineering | ❌ | 378 |
| Six Sigma Methodology | ❌ | 371 |
| Industrial Engineering | ✅ | 344 |
| Site Reliability Engineering | ✅ | 241 |

# 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
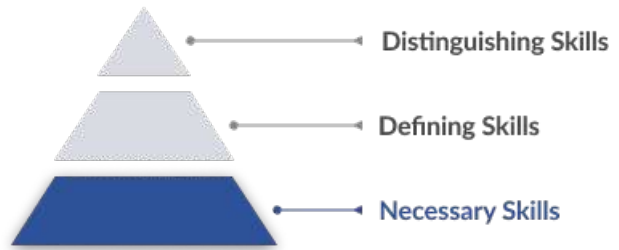
| Skill | Salary Boosting | Job Postings Requesting |
|---|:---:|---:|
| Mechanical Engineering | ❌ | 645 |
| Auditing | ❌ | 567 |
| Process Improvement | ❌ | 507 |
| Data Analysis | ❌ | 487 |
| New Product Development | ❌ | 403 |
| Automation | ❌ | 399 |
| Root Cause Analysis | ❌ | 357 |
| Tooling | ❌ | 355 |
| Machining | ❌ | 301 |
| Quality Management | ❌ | 255 |

# What skills are they posting for?

## Top 15 Skills for Industrial Engineers by Quarter

Skills help us understand the direction an occupation is headed.

| May 2022 - Jul 2022 | Aug 2022 - Oct 2022 | Nov 2022 - Jan 2023 | Feb 2023 - Apr 2023 | May 2023 - Jul 2023 |
|---|---|---|---|---|
| Tooling | Project Management | Project Management | Project Management | |
| Project Management | Manufacturing Processes | Medical Devices | Manufacturing Processes | |
| Automation | Tooling | Process Improvement | Medical Devices | |
| Lean Manufacturing | Medical Devices | Manufacturing Processes | Auditing | |
| Continuous Improvement Process | Root Cause Analysis | Auditing | Automation | |
| Medical Devices | Continuous Improvement Process | Data Analysis | Continuous Improvement Process | |
| New Product Development | Auditing | New Product Development | Process Improvement | |
| Quality Management Systems | Data Analysis | Quality Management Systems | Quality Management Systems | |
| Root Cause Analysis | Process Improvement | Lean Manufacturing | Data Analysis | |
| Manufacturing Processes | Quality Management Systems | Root Cause Analysis | Root Cause Analysis | |
| Process Improvement | New Product Development | Tooling | Lean Manufacturing | |
| Data Analysis | Automation | Good Manufacturing Practices | Good Manufacturing Practices | |
| Corrective And Preventive Action (... | Lean Manufacturing | Continuous Improvement Process | Corrective And Preventive Action (... | |
| Auditing | Good Manufacturing Practices | Automation | New Product Development | |
| Good Manufacturing Practices | Corrective And Preventive Action (... | Corrective And Preventive Action (... | Tooling | |

# Occupation Gain and Drain

## Occupation Gain and Drain

The table below analyzes the profiles of current and past people in your selected occupation. The left column shows job transitions from other occupations to your selected occupation. The right column shows job transitions from your selected occupation to other occupations.

Please note, results are only available at the national level and the 2 and 5 digit SOC level. Other SOC levels will be converted to 5-digit SOC. Also your selection has been limited to 100 occupations.

The following represents the job transitions of employees in your selected occupation in the United States:
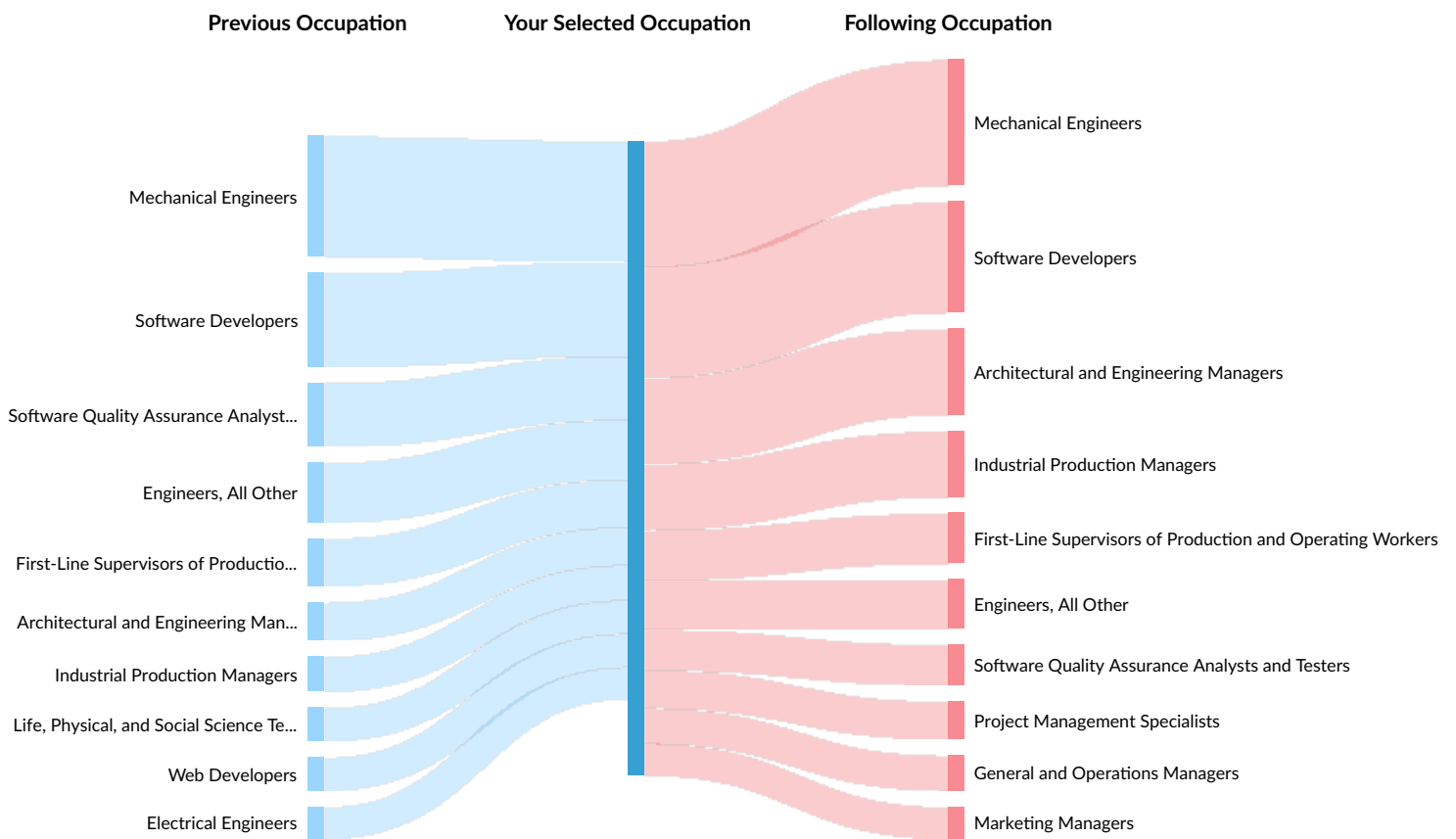


| Previous Occupations | Transitions |
|---|---|
| Mechanical Engineers | 32,961 |
| Software Developers | 25,705 |
| Software Quality Assurance Analysts and Testers | 17,372 |

| Previous Occupations | Transitions |
|---|---|
| Engineers, All Other | 16,355 |
| First-Line Supervisors of Production and Operating Workers | 13,022 |
| Architectural and Engineering Managers | 10,394 |
| Industrial Production Managers | 9,586 |
| Life, Physical, and Social Science Technicians, All Other | 9,156 |
| Web Developers | 9,108 |
| Electrical Engineers | 8,755 |
| Computer User Support Specialists | 7,255 |
| General and Operations Managers | 6,413 |
| Graphic Designers | 5,781 |
| Managers, All Other | 5,523 |
| Marketing Managers | 5,507 |
| Computer Systems Analysts | 5,505 |
| Industrial Engineering Technologists and Technicians | 5,119 |
| Market Research Analysts and Marketing Specialists | 5,018 |
| Computer Occupations, All Other | 4,981 |
| Civil Engineers | 4,919 |
| Management Analysts | 4,735 |
| Business Operations Specialists, All Other | 4,674 |
| Project Management Specialists | 4,639 |
| Network and Computer Systems Administrators | 4,631 |
| Chief Executives | 4,591 |
| Teaching Assistants, Postsecondary | 4,588 |
| Postsecondary Teachers | 4,389 |
| Electronics Engineers, Except Computer | 3,916 |

| Previous Occupations | Transitions |
|---|---|
| First-Line Supervisors of Office and Administrative Support Workers | 3,715 |
| Commercial and Industrial Designers | 3,596 |
| Chemical Engineers | 3,522 |
| Inspectors, Testers, Sorters, Samplers, and Weighers | 3,323 |
| First-Line Supervisors of Mechanics, Installers, and Repairers | 3,257 |
| Computer and Information Systems Managers | 2,539 |
| Operations Research Analysts | 2,315 |
| Teaching Assistants, Except Postsecondary | 2,249 |
| Materials Engineers | 2,182 |
| Customer Service Representatives | 2,181 |
| Aerospace Engineers | 2,048 |
| Electrical and Electronic Engineering Technologists and Technicians | 2,036 |
| Computer Hardware Engineers | 1,938 |
| Maintenance and Repair Workers, General | 1,922 |
| Sales Engineers | 1,877 |
| Secretaries and Administrative Assistants, Except Legal, Medical, and Executive | 1,730 |
| Sales Managers | 1,681 |
| Logisticians | 1,593 |
| Retail Salespersons | 1,592 |
| Medical Scientists, Except Epidemiologists | 1,585 |
| Biological Technicians | 1,545 |
| Construction Managers | 1,515 |
| Chemists | 1,483 |
| Transportation, Storage, and Distribution Managers | 1,469 |

| Previous Occupations | Transitions |
|---|---|
| Compliance Officers | 1,451 |
| Buyers and Purchasing Agents | 1,440 |
| Training and Development Specialists | 1,435 |
| Natural Sciences Managers | 1,434 |
| Accountants and Auditors | 1,374 |
| Engineering Technologists and Technicians, Except Drafters, All Other | 1,366 |
| Social and Human Service Assistants | 1,338 |
| Computer and Information Research Scientists | 1,307 |
| Production, Planning, and Expediting Clerks | 1,160 |
| Environmental Engineers | 1,150 |
| Purchasing Managers | 1,140 |
| Financial Managers | 1,118 |
| Public Relations Specialists | 1,101 |
| Helpers--Production Workers | 1,071 |
| Health and Safety Engineers, Except Mining Safety Engineers and Inspectors | 1,058 |
| Art Directors | 1,049 |
| Machinists | 983 |
| First-Line Supervisors of Construction Trades and Extraction Workers | 980 |
| Human Resources Specialists | 970 |
| Clinical Laboratory Technologists and Technicians | 941 |
| Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | 941 |
| Mechanical Engineering Technologists and Technicians | 916 |
| Petroleum Engineers | 903 |
| Cost Estimators | 893 |

| Previous Occupations | Transitions |
|---|---|
| Information Security Analysts | 861 |
| Designers, All Other | 848 |
| Computer Programmers | 843 |
| Tutors | 835 |
| Chemical Technicians | 818 |
| Teachers and Instructors, All Other | 799 |
| Stockers and Order Fillers | 788 |
| Social Science Research Assistants | 775 |
| Coaches and Scouts | 726 |
| Secondary School Teachers, Except Special and Career/Technical Education | 670 |
| Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products | 667 |
| First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors | 657 |
| Computer Network Architects | 651 |
| Producers and Directors | 643 |
| Bioengineers and Biomedical Engineers | 642 |
| Educational, Guidance, and Career Counselors and Advisors | 625 |
| Waiters and Waitresses | 612 |
| Technical Writers | 601 |
| Environmental Scientists and Specialists, Including Health | 600 |
| Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel | 597 |
| Public Relations Managers | 591 |
| Architectural and Civil Drafters | 572 |

| Following Occupations | Transitions |
|---|---|
| Mechanical Engineers | 34,369 |
| Software Developers | 30,317 |
| Architectural and Engineering Managers | 23,560 |
| Industrial Production Managers | 18,041 |
| First-Line Supervisors of Production and Operating Workers | 13,713 |
| Engineers, All Other | 13,413 |
| Software Quality Assurance Analysts and Testers | 11,100 |
| Project Management Specialists | 10,369 |
| General and Operations Managers | 9,634 |
| Marketing Managers | 8,795 |
| Computer Occupations, All Other | 7,568 |
| Electrical Engineers | 7,323 |
| Managers, All Other | 7,264 |
| Computer User Support Specialists | 5,763 |
| Web Developers | 5,763 |
| Management Analysts | 5,589 |
| Computer Systems Analysts | 5,359 |
| Chief Executives | 5,125 |
| Business Operations Specialists, All Other | 4,795 |
| Commercial and Industrial Designers | 4,499 |
| Electronics Engineers, Except Computer | 4,318 |
| Computer and Information Systems Managers | 4,268 |
| Life, Physical, and Social Science Technicians, All Other | 4,185 |
| Civil Engineers | 4,155 |
| Market Research Analysts and Marketing Specialists | 4,072 |
| Network and Computer Systems Administrators | 3,937 |

| Following Occupations | Transitions |
| --- | --- |
| First-Line Supervisors of Office and Administrative Support Workers | 3,747 |
| Graphic Designers | 3,726 |
| First-Line Supervisors of Mechanics, Installers, and Repairers | 3,569 |
| Postsecondary Teachers | 3,328 |
| Sales Engineers | 2,634 |
| Teaching Assistants, Postsecondary | 2,523 |
| Chemical Engineers | 2,442 |
| Sales Managers | 2,346 |
| Transportation, Storage, and Distribution Managers | 2,315 |
| Operations Research Analysts | 2,242 |
| Computer Hardware Engineers | 2,123 |
| Construction Managers | 2,115 |
| Purchasing Managers | 2,022 |
| Aerospace Engineers | 1,946 |
| Materials Engineers | 1,892 |
| Inspectors, Testers, Sorters, Samplers, and Weighers | 1,755 |
| Industrial Engineering Technologists and Technicians | 1,706 |
| Customer Service Representatives | 1,655 |
| Logisticians | 1,654 |
| Financial Managers | 1,555 |
| Natural Sciences Managers | 1,542 |
| Buyers and Purchasing Agents | 1,509 |
| Accountants and Auditors | 1,373 |
| Compliance Officers | 1,363 |
| Health and Safety Engineers, Except Mining Safety Engineers and Inspectors | 1,285 |

| Following Occupations | Transitions |
|---|---|
| Computer and Information Research Scientists | 1,271 |
| Human Resources Specialists | 1,260 |
| Training and Development Specialists | 1,146 |
| Teaching Assistants, Except Postsecondary | 1,048 |
| Production, Planning, and Expediting Clerks | 1,033 |
| Environmental Engineers | 1,032 |
| First-Line Supervisors of Construction Trades and Extraction Workers | 1,010 |
| Maintenance and Repair Workers, General | 1,005 |
| Medical Scientists, Except Epidemiologists | 993 |
| Secretaries and Administrative Assistants, Except Legal, Medical, and Executive | 966 |
| Information Security Analysts | 948 |
| Data Scientists | 948 |
| Cost Estimators | 937 |
| Retail Salespersons | 926 |
| Computer Network Architects | 922 |
| Social and Human Service Assistants | 918 |
| Electrical and Electronic Engineering Technologists and Technicians | 892 |
| Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products | 832 |
| Producers and Directors | 814 |
| Education Administrators, Kindergarten through Secondary | 810 |
| Sales Representatives, Wholesale and Manufacturing, Technical and Scientific Products | 808 |
| Human Resources Managers | 773 |
| Medical and Health Services Managers | 746 |

| Following Occupations | Transitions |
|---|---|
| Art Directors | 745 |
| Public Relations Specialists | 737 |
| Petroleum Engineers | 657 |
| Computer Programmers | 654 |
| Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel | 627 |
| Chemists | 603 |
| Public Relations Managers | 597 |
| Biological Technicians | 588 |
| Social and Community Service Managers | 579 |
| First-Line Supervisors of Transportation and Material Moving Workers, Except Aircraft Cargo Handling Supervisors | 576 |
| Real Estate Sales Agents | 557 |
| Occupational Health and Safety Specialists | 545 |
| Coaches and Scouts | 534 |
| Helpers--Production Workers | 512 |
| Financial and Investment Analysts | 501 |
| Designers, All Other | 500 |
| Registered Nurses | 489 |
| Engineering Technologists and Technicians, Except Drafters, All Other | 478 |
| Teachers and Instructors, All Other | 473 |
| Environmental Scientists and Specialists, Including Health | 472 |
| Technical Writers | 457 |
| Food Scientists and Technologists | 453 |
| Stockers and Order Fillers | 445 |
| Bioengineers and Biomedical Engineers | 432 |

# Graduate Pipeline

**4 Programs**

7 programs can train for this job, while only 4 programs have produced completers in this region.

**23 Completions (2021)**

The completions from all regional institutions for all degree types.

**92 Openings (2021)**

The average number of openings for an occupation in the region is 51.

| Top Programs | Completions (2021) | |
| --- | --- | --- |
| Manufacturing Engineering | 14 | |
| Engineering, General | 8 | |
| Industrial Engineering | 1 | |

| Top Schools | Completions (2021) | |
| --- | --- | --- |
| Colorado School of Mines | 22 | |
| Colorado Christian University | 1 | |