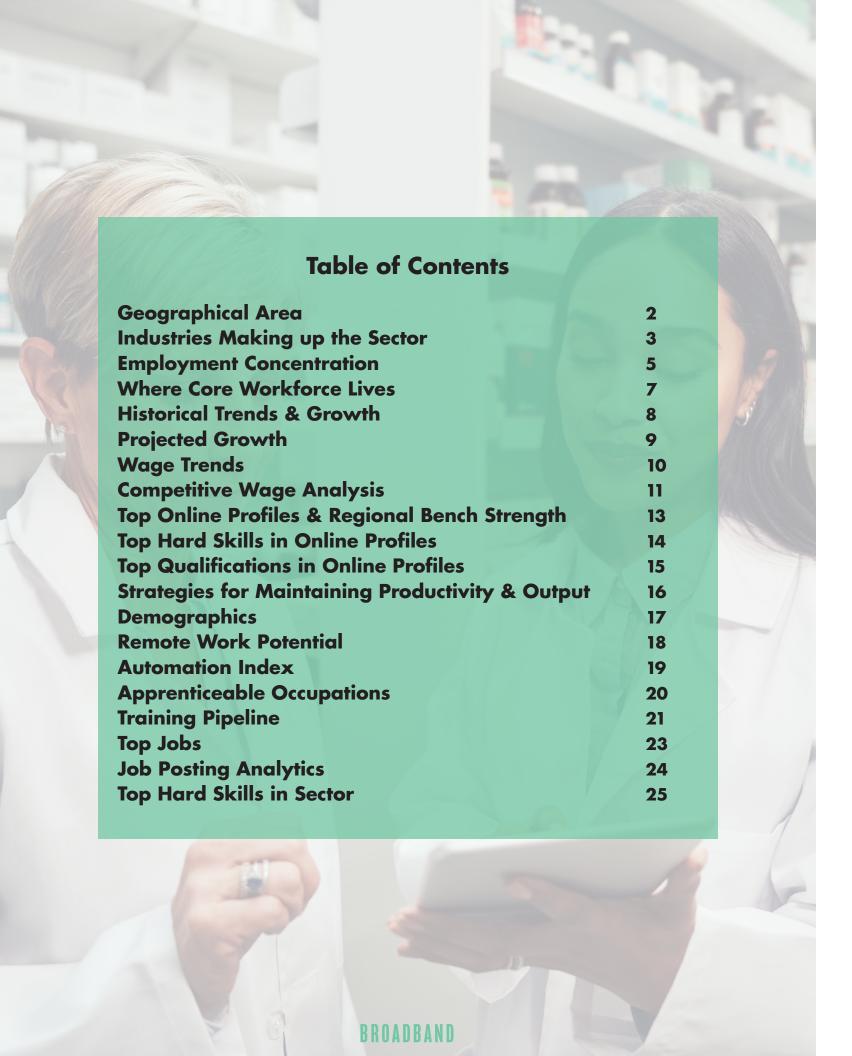


2022

# Broadband INDUSTRY PROFILE

for Arapahoe & Douglas Counties Colorado WIOA Central Planning Region





#### GEOGRAPHICAL AREA

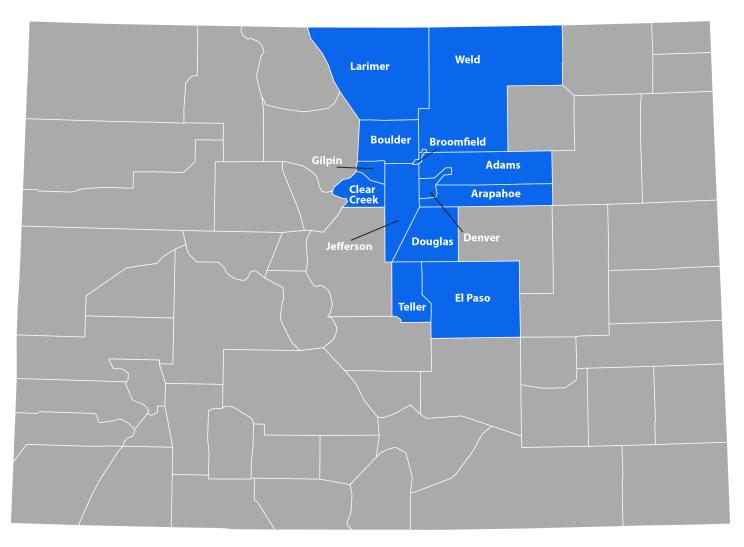
The geographic area for this industry profile includes the 13 counties that make up Colorado's Urban Front Range.

The geographic region includes the following metropolitan areas:

- Boulder
- Colorado Springs
- Denver-Aurora-Lakewood
- Fort Collins
- Greeley

In 2021, this thirteen-county region employed nearly 2.6 million people across all industries, and made up over 85% of Colorado's total employment.

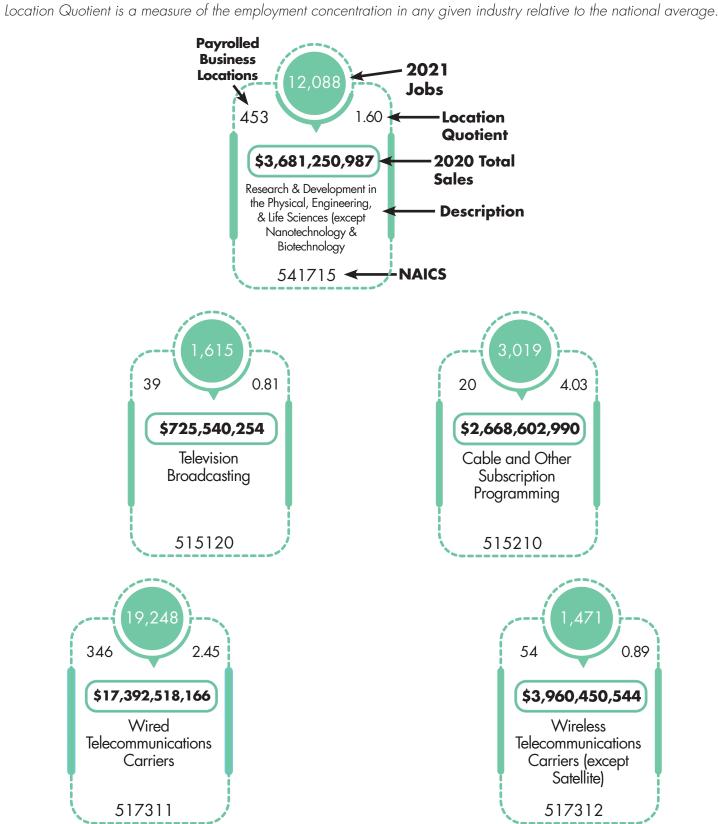
In 2020, the gross regional product (GRP) for Colorado's Urban Front Range was \$312.76 billion, which made up around 1.7% of the national GRP. GRP is the total market value of all goods and services produced in the region.



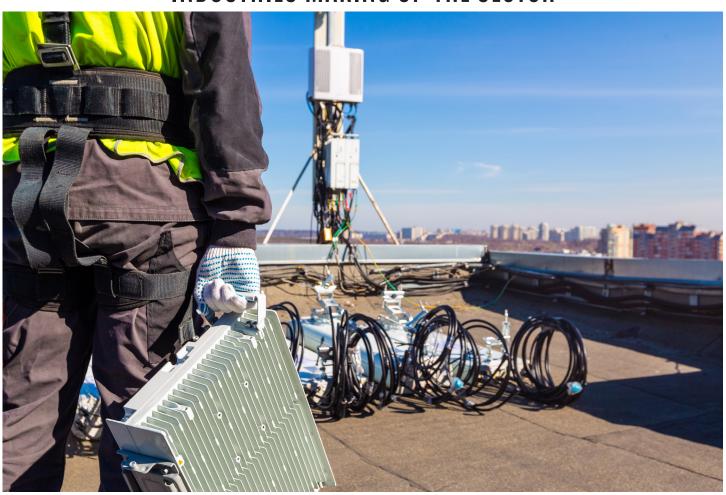
#### INDUSTRIES MAKING UP THE SECTOR

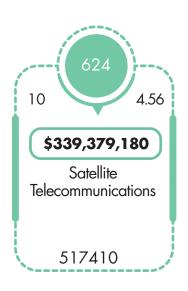
The Broadband Sector employs 26,297 people in 527 payrolled business locations along Colorado's Urban Front Range. In 2021, the sector had \$25.3 bilion in sales, and contributed \$14.3 billion to the region's Gross Regional Product. The region's geographic location and extensive infrastructure ensures a strong global supply chain, and a diversified business climate. In addition, ready access to highly skilled workers and worldclass research institutions offers employers in the sector many advantages in a global economy.

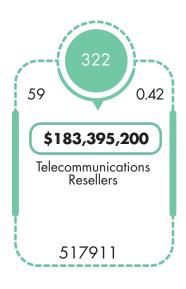
#### Note:



## INDUSTRIES MAKING UP THE SECTOR





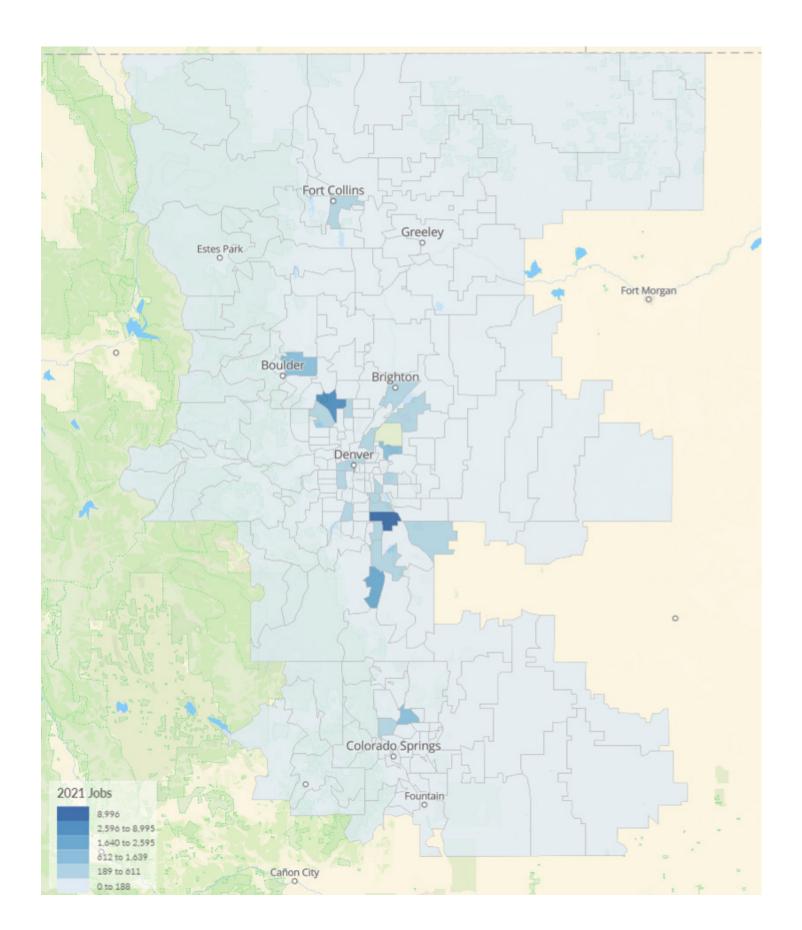


Source: EMSI Burning Glass

#### **TOTALS**

2021 Jobs - 26,297 **Payrolled Business Locations - 527 Location Quotient - 2.47** Total Sales - \$25,269,886,334

## EMPLOYMENT CONCENTRATION MAP



## **EMPLOYMENT CONCENTRATION**

The Front Range region is a national hub for broadband, with employment in the sector 2.47 times more concentrated than the national average. The highest concentrations are in cable and other subscription programming (4.03 times the national average, and wired telecommunications carriers (2.45 times the national average).

Note: A supplement is any kind of employer paid benefit beyond wage or salary.

#### **Jobs and Average Earnings by County**

| County      | 2021 Jobs | Average<br>Wage &<br>Salaries | Average<br>Cost of<br>Supplements |
|-------------|-----------|-------------------------------|-----------------------------------|
| Arapahoe    | 10,689    | \$132,184                     | \$24,409                          |
| Denver      | 3,994     | \$118,898                     | \$21,841                          |
| Douglas     | 3,130     | \$119,408                     | \$21,789                          |
| Broomfield  | 2,596     | \$146,203                     | \$26,998                          |
| El Paso     | 1,496     | \$74,971                      | \$13,404                          |
| Adams       | 1,375     | \$113,200                     | \$20,456                          |
| Boulder     | 1,147     | \$111,042                     | \$20,028                          |
| Jefferson   | 810       | \$85,227                      | \$14,649                          |
| Larimer     | 810       | \$59,036                      | \$10,483                          |
| Weld        | 211       | \$71,544                      | \$11,640                          |
| Teller      | 36        | \$54,867                      | \$8,815                           |
| Clear Creek | <10       | Insf. Data                    | Insf. Data                        |
| Gilpin      | 0         | 0                             | 0                                 |
| TOTALS      | 26,292    | \$90,548                      | \$16,209                          |

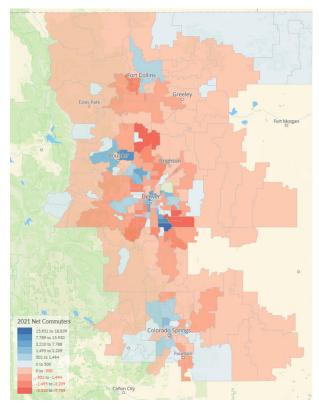
#### WHERE CORE WORKFORCE LIVES

Every industry sector has a group of occupations that it needs to produce its good or render its service. This is called a staffing pattern, and these staffing patterns include management, business and financial occupations, administrative and support occupations, and core occupations.

Core occupations in the Sector include some installation, maintenance and repair occupations, and production occupations. This map shows where the core workers in the industry live (orange) and where they work (blue).

For this industry, the core occupations are defined as follows:

- Computer & Mathematical
- Installation, Maintenance, & Repair
- Sales & Related



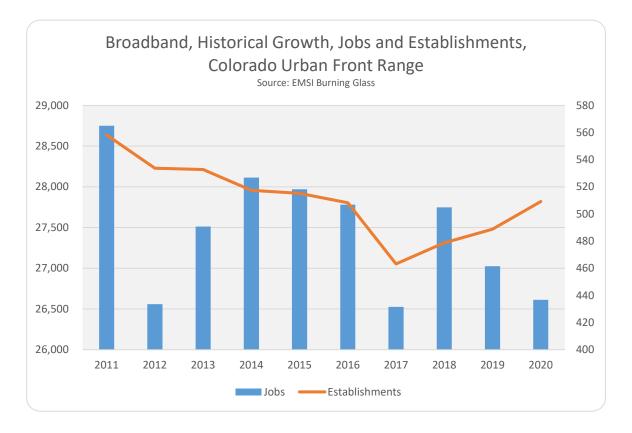
| County      | Net Commuters | Resident Workers | Jobs   |
|-------------|---------------|------------------|--------|
| Denver      | 32,812        | 54,192           | 87,004 |
| Arapahoe    | 8,918         | 50,582           | 59,500 |
| Boulder     | 8,507         | 26,743           | 35,250 |
| Broomfield  | 2,324         | 7,689            | 10,012 |
| Gilpin      | (78)          | 254              | 176    |
| Clear Creek | (104)         | 321              | 216    |
| El Paso     | (319)         | 45,523           | 45,204 |
| Teller      | (786)         | 1,458            | 672    |
| Larimer     | (1,118)       | 18,821           | 17,704 |
| Adams       | (8,512)       | 30,241           | 21,729 |
| Weld        | (9,970)       | 18,049           | 8,079  |
| Douglas     | (11,650)      | 35,074           | 23,423 |
| Jefferson   | (13,763)      | 48,899           | 35,136 |

Source: EMSI Burning Glass

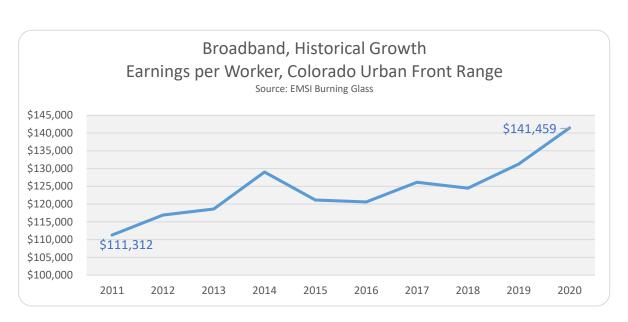
#### HISTORICAL TRENDS & GROWTH

- Over the last decade, employment in the Broadband Sector decreased by 2,138 jobs, an annual growth rate of -0.86%.
- The number of establishments decreased annually by -1.0% over the same time period, moving from 558 in 2011 to 509 in 2020.
- Average worker earnings in the sector, which includes wages, salaries, and compensation, grew from \$111,312 in 2011 to \$141,459 in 2020, an annual growth rate of 2.7%.

#### **Historical Trends**



#### **Historical Growth**



#### PROJECTED GROWTH

The Broadband Sector is expected to decline at an annual rate of 0.4%, with the number of jobs decreasing to 25,919 by 2025. The Urban Front Range continues to be a national hub in several sector industries with overall employment concentration in the sector as a whole at 2.47 times the national average.

#### Note:

Location Quotient is a measure of the employment concentration in any given industry relative to the national average.

| NAICS  | Description   | 2021<br>Jobs | 2025<br>Jobs | 2021-<br>2025<br>Change | Location<br>Quotient | 2020 Payrolled Business Locations |
|--------|---|--------------|--------------|-------------------------|----------------------|-----------------------------------|
| 515120 | Television Broadcasting                                       | 1,615        | 1,671        | 57                      | 0.81                 | 39                                |
| 515210 | Cable & Other<br>Subscription<br>Programming                  | 3,019        | 3,165        | 147                     | 4.03                 | 20                                |
| 517311 | Wired<br>Telecommunications<br>Carriers                       | 19,248       | 18,781       | (467)                   | 2.45                 | 346                               |
| 517312 | Wireless<br>Telecommunications<br>Carriers (except Satellite) | 1,471        | 1,306        | (164)                   | 0.89                 | 54                                |
| 517410 | Satellite<br>Telecommunications                               | 624          | 750          | 126                     | 4.56                 | 10                                |
| 517911 | Telecommunications<br>Resellers                               | 322          | 245          | (77)                    | 0.42                 | 59                                |
|        | TOTALS  | 254,855      | 281,165      | 26,310                  | 1.13                 | 12,127                            |

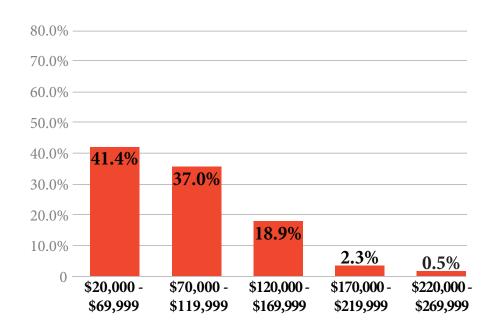
Source: EMSI Burning Glass



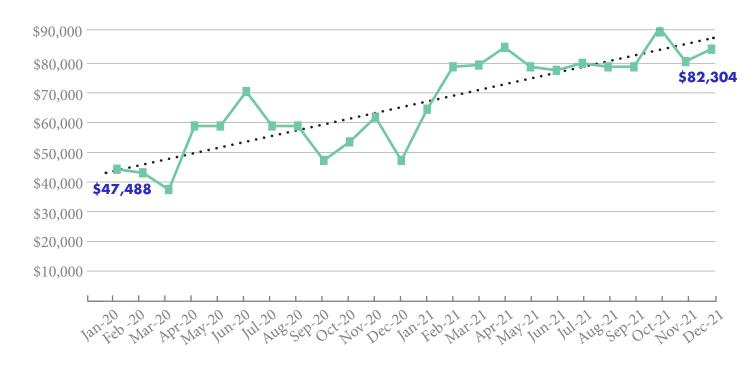
#### **WAGE TRENDS**

The bar graph and the line graph below are from EMSI Burning Glass, and reflect wage trends in job postings for the industry. The bar graph shows the posting wage curve for 2021 to date, with the median posted annual wage \$77,696. The line graph below shows the median wage from job postings by month over a three-year period.

#### **Salary Range of Unique Job Postings**



#### **Advertised Wage Trends**



## **COMPETITIVE WAGE ANALYSIS**

This table shows employment within the Colorado Urban Front Range in the top 20 occupations in the sector. Regional wage ranges and the median wage are shown.

## **COMPETITIVE WAGE ANALYSIS**

Due to the timeframes in which wage data is collected and collated, Colorado's 2022 minimum wage of \$12.56 per hour may not be accurately reflected in some of the wages listed in the table. House Bill 1210, passed in late 2019, has allowed local governments to set higher wages. These municipal minimum wages will also not be accurately reflected in some of the wages listed in the table.

| SOC<br>Code | Description  | # Jobs in<br>Industry | % of Total<br>Employment<br>in Industry | # Jobs<br>across<br>Industries | Average<br>Annual<br>Openings | Average<br>Wage | 10th<br>Percentile<br>Wage | 25th<br>Percentile<br>Wage | Median<br>Wage | 75th<br>Percentile<br>Wage | 90th<br>Percentile<br>Wage |
|-------------|--|-----------------------|---|--------------------------------|-------------------------------|-----------------|----------------------------|----------------------------|----------------|----------------------------|----------------------------|
| 11-1021     | General & Operations Managers  | 293                   | 1.1%                                    | 32,731                         | 3,590                         | \$71.32         | \$26.57                    | \$39.11                    | \$60.37        | \$93.63                    | \$132.71                   |
| 13-1161     | Market Research Analysts & Marketing Specialists   | 595                   | 2.3%                                    | 20,905                         | 2,766                         | \$38.24         | \$19.01                    | \$24.81                    | \$34.11        | \$47.97                    | \$64.47                    |
| 13-1198     | Project Management Specialists & Business<br>Operations Specialists, All Other                       | 1,436                 | 5.5%                                    | 51,871                         | 4,714                         | \$43.94         | \$22.65                    | \$29.41                    | \$40.16        | \$54.02                    | \$69.13                    |
| 13-2011     | Accountants & Auditors   | 326                   | 1.2%                                    | 35,865                         | 3,885                         | \$41.50         | \$22.67                    | \$28.06                    | \$37.08        | \$50.48                    | \$65.31                    |
| 15-1231     | Computer Network Support Specialists   | 723                   | 2.8%                                    | 4,079                          | 405                           | \$36.94         | \$21.04                    | \$25.82                    | \$34.23        | \$45.04                    | \$57.98                    |
| 15-1232     | Computer User Support Specialists  | 467                   | 1.8%                                    | 15,409                         | 1,555                         | \$30.02         | \$18.36                    | \$21.96                    | \$27.76        | \$35.74                    | \$45.39                    |
| 15-1241     | Computer Network Architects  | 895                   | 3.4%                                    | 6,194                          | 468                           | \$60.30         | \$37.46                    | \$46.52                    | \$59.13        | \$72.92                    | \$85.89                    |
| 15-1244     | Network & Computer Systems Administrators  | 751                   | 2.9%                                    | 11,514                         | 949                           | \$44.45         | \$27.51                    | \$33.74                    | \$42.81        | \$53.84                    | \$64.81                    |
| 15-1256     | Software Developers & Software Quality<br>Assurance Analysts & Testers                               | 1,292                 | 4.9%                                    | 50,056                         | 5,808                         | \$54.39         | \$32.71                    | \$40.77                    | \$53.14        | \$66.32                    | \$79.67                    |
| 15-1299     | Computer Occupations, All Other  | 292                   | 1.1%                                    | 11,969                         | 1,162                         | \$52.88         | \$28.48                    | \$37.71                    | \$50.03        | \$64.88                    | \$80.54                    |
| 17-2072     | Electronics Engineers, Except Computer   | 1,806                 | 6.9%                                    | 6,213                          | 485                           | \$57.16         | \$35.41                    | \$43.32                    | \$55.43        | \$70.31                    | \$82.60                    |
| 27-2012     | Producers & Directors  | 448                   | 1.7%                                    | 1,879                          | 209                           | \$39.63         | \$15.37                    | \$21.33                    | \$30.30        | \$45.66                    | \$76.85                    |
| 27-4012     | Broadcast Technicians  | 344                   | 1.3%                                    | 699                            | 79                            | \$29.89         | \$14.27                    | \$20.90                    | \$27.23        | \$35.22                    | \$46.67                    |
| 41-1012     | First-Line Supervisors of Non-Retail Sales Workers   | 411                   | 1.6%                                    | 6,841                          | 670                           | \$48.40         | \$19.34                    | \$28.14                    | \$41.35        | \$62.45                    | \$85.42                    |
| 41-3091     | Sales Representatives of Services, Except<br>Advertising, Insurance, Financial Services, &<br>Travel | 2,819                 | 10.7%                                   | 27,983                         | 3,643                         | \$39.57         | \$14.30                    | \$20.33                    | \$31.12        | \$49.08                    | \$77.86                    |
| 43-1011     | First-Line Supervisors of Office & Administrative Support<br>Workers                                 | 275                   | 1.0%                                    | 20,206                         | 2,293                         | \$31.51         | \$18.12                    | \$22.77                    | \$29.42        | \$37.73                    | \$47.57                    |
| 43-4051     | Customer Service Representatives   | 1,863                 | 7.1%                                    | 44,606                         | 6,184                         | \$19.07         | \$12.44                    | \$14.14                    | \$17.56        | \$22.30                    | \$27.88                    |
| 49-1011     | First-Line Supervisors of Mechanics, Installers, & Repairers   | 423                   | 1.6%                                    | 8,673                          | 935                           | \$37.09         | \$23.26                    | \$28.15                    | \$36.07        | \$44.90                    | \$52.86                    |
| 49-2022     | Telecommunications Equipment Installers & Repairers, Except Line Installers                          | 2,450                 | 9.3%                                    | 3,407                          | 434                           | \$30.96         | \$19.47                    | \$23.59                    | \$30.79        | \$37.49                    | \$44.22                    |
| 49-9052     | Telecommunications Line Installers & Repairers   | 1,078                 | 4.1%                                    | 1,608                          | 211                           | \$26.20         | \$17.17                    | \$20.03                    | \$24.64        | \$30.64                    | \$36.90                    |

## TOP ONLINE PROFILES & REGIONAL BENCH STRENGTH

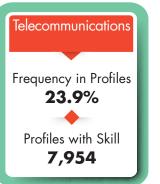
EMSI Burning Glass has access to over 102 million online resumes throughout the United States, and offers analytical data on those profiles. This table shows online profiles of people working in the Sector that have been updated at some time in calendar 2021. While not all of these people may be presently looking for work, the fact they have recently updated their online resumes suggests they may be open to new opportunities.

| Occupation  | Profiles | Percent |
|---|----------|---------|
| Software Developers & Software Quality Assurance<br>Analysts & Testers  | 2,781    | 8.4%    |
| Network & Computer Systems Administrators   | 1,754    | 5.3%    |
| Personal Service Managers, All Other; Entertainment & Recreation Managers, Except Gambling; & Managers, All Other | 1,598    | 4.8%    |
| Computer Occupations, All Other   | 1,402    | 4.2%    |
| Computer User Support Specialists   | 1,395    | 4.2%    |
| Marketing Managers  | 1,394    | 4.2%    |
| Customer Service Representatives  | 1,384    | 4.2%    |
| Sales Managers  | 1,083    | 3.3%    |
| General & Operations Managers   | 1,058    | 3.2%    |
| First-Line Supervisors of Office & Administrative Support Workers   | 889      | 2.7%    |
| Computer & Information Systems Managers   | 886      | 2.7%    |
| Architectural & Engineering Managers  | 744      | 2.2%    |
| Management Analysts   | 715      | 2.1%    |
| Sales Representatives of Services, Except Advertising,<br>Insurance, Financial Services, & Travel                 | 712      | 2.1%    |
| Computer Systems Analysts   | 672      | 2.0%    |
| Engineers, All Other  | 506      | 1.5%    |
| Financial Managers  | 501      | 1.5%    |
| Industrial Engineers  | 488      | 1.5%    |
| Retail Salespersons   | 444      | 1.3%    |
| Project Management Specialists & Business<br>Operations Specialists, All Other                                    | 439      | 1.3%    |

#### TOP HARD SKILLS IN ONLINE PROFILES

The figures on this page show the top hard skills listed in online profiles of people working in the Sector that have been updated at some time in calendar 2021.

Source: EMSI Burning Glass



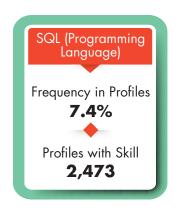






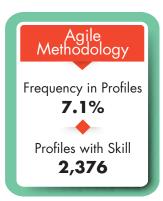


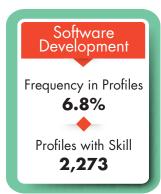














Frequency in Profiles
6.6%
Profiles with Skill
2,198





## TOP QUALIFICATIONS IN ONLINE PROFILES

The figures on this page show the top qualifications listed in online profiles of people working in the Sector that have been updated at some time in calendar 2021.





















Source: EMSI Burning Glass

## STRATEGIES FOR MAINTAINING PRODUCTIVITY & OUTPUT

This section explores various options and resources that can be used to leverage scarce labor. The table immediately below shows hires, separations and turnover rate for the top 20 occupations in the sector (2020).

- There are generally five strategies an employer can use to attract workers:

  1. Offer more money and/or signing bonus (this gets new hires in, but does not necessarily keep them

  - Hire remote workers for those functions that can be filled using virtual technology.
     Invest capital in automation to leverage current labor productivity.
     Work with local K-12 and postsecondary educators to expose students to career pathways in the
  - 5. Work with the local workforce system and its partners to seek out and train hidden talent through internships and apprenticeships.

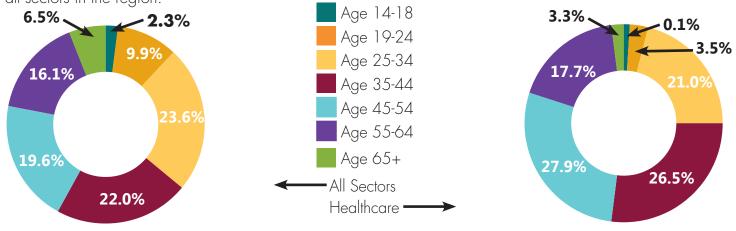
| SOC<br>Code | Description   | Hires  | Separations | Turnover<br>Rate |
|-------------|---|--------|-------------|------------------|
| 43-4051     | Customer Service Representatives  | 36,067 | 37,253      | 83.5%            |
| 41-3091     | Sales Representatives of Services, Except Advertising,<br>Insurance, Financial Services, & Travel | 21,712 | 21,700      | 77.5%            |
| 43-1011     | First-Line Supervisors of Office & Administrative Support Workers                                 | 11,802 | 12,573      | 62.2%            |
| 49-1011     | First-Line Supervisors of Mechanics, Installers, & Repairers                                      | 4,883  | 4,847       | 55.9%            |
| 13-2011     | Accountants & Auditors  | 18,909 | 19,505      | 54.4%            |
| 13-1161     | Market Research Analysts & Marketing Specialists  | 12,387 | 11,297      | 54.0%            |
| 11-1021     | General & Operations Managers   | 18,471 | 17,435      | 53.3%            |
| 49-9052     | Telecommunications Line Installers & Repairers  | 924    | 792         | 49.3%            |
| 27-2012     | Producers & Directors   | 777    | 854         | 45.5%            |
| 13-1198     | Project Management Specialists & Business Operations<br>Specialists, All Other                    | 21,235 | 22,836      | 44.0%            |
| 27-4012     | Broadcast Technicians   | 253    | 306         | 43.8%            |
| 49-2022     | Telecommunications Equipment Installers & Repairers, Except Line Installers                       | 1,468  | 1,440       | 42.3%            |
| 15-1232     | Computer User Support Specialists   | 6,378  | 6,271       | 40.7%            |
| 15-1299     | Computer Occupations, All Other   | 4,667  | 4,841       | 40.4%            |
| 41-1012     | First-Line Supervisors of Non-Retail Sales Workers  | 2,738  | 2,713       | 39.7%            |
| 15-1244     | Network & Computer Systems Administrators   | 4,009  | 4,375       | 38.0%            |
| 15-1241     | Computer Network Architects   | 2,008  | 2,185       | 35.3%            |
| 15-1231     | Computer Network Support Specialists  | 1,506  | 1,433       | 35.1%            |
| 15-1256     | Software Developers & Software Quality Assurance Analysts & Testers                               | 21,359 | 17,224      | 34.4%            |
| 17-2072     | Electronics Engineers, Except Computer  | 1,714  | 1,744       | 28.1%            |

### DEMOGRAPHICS

#### **Comparative Retirement Risk**

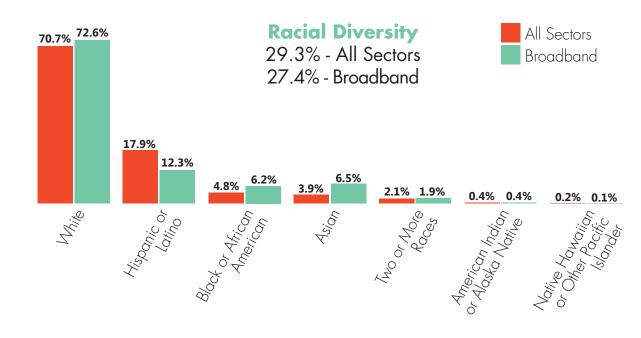
Source: EMSI Burning Glass

The Sector has lower retirement risk, with 3.3% of its labor force aged 65 or older, compared with 6.5% for all sectors in the region.



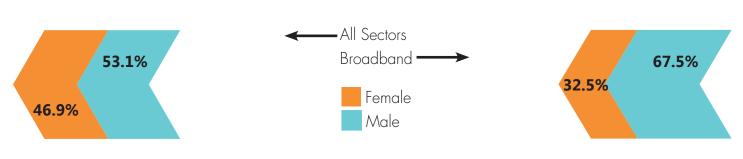
#### **Comparative Racial & Ethnic Diversity**

The bar graph below shows the racial and ethnic diversity in the Sector compared to all sectors in the region.



#### **Comparative Gender**

The figures below show the gender diversity in the Sector compared to all sectors in the region.



#### REMOTE WORK POTENTIAL

This table is customized to the sector using its entire staffing pattern along Colorado's Urban Front Range. It uses data from EMSI Burning Glass to determine the percent of unique job postings during 2021 that specified the new hire could work remotely, at least part of the time.

Data on remote working capabilities can be combined with capital investment in virtual technologies to create hybrid work models that can leverage scarce local labor while at the same time ensuring sector demand can be met. Hybrid models are generally popular with job seekers, and have the virtue of allowing employers to recruit further afield, and even internationally for selected business functions.

| SOC<br>Code | Description                                  | Employed in Industry | Estimated<br>Remote<br>Capability | Occupation Family Posted Remotely |
|-------------|--|----------------------|-----------------------------------|-----------------------------------|
| 15          | Computer & Mathematical                      | 5,190                | 1,114                             | 21.5%                             |
| 13          | Business & Financial Operations              | 3,262                | 611                               | 18.7%                             |
| 27          | Arts, Design, Entertainment, Sports, & Media | 1,951                | 242                               | 12.4%                             |
| 19          | Life, Physical, & Social Science             | 79                   | 9                                 | 11.5%                             |
| 21          | Community & Social Service                   | 0                    | 0                                 | 11.4%                             |
| 11          | Management                                   | 1,234                | 140                               | 11.3%                             |
| 41          | Sales & Related                              | 4,144                | 459                               | 11.1%                             |
| 43          | Office & Administrative Support              | 3,522                | 377                               | 10.7%                             |
| 17          | Architecture & Engineering                   | 2,105                | 192                               | 9.1%                              |
| 25          | Educational Instruction & Library            | <10                  | N/A                               | 7.2%                              |
| 49          | Installation, Maintenance, & Repair          | 4,407                | 178                               | 4.0%                              |
| 31          | Healthcare Support                           | <10                  | N/A                               | 3.9%                              |
| 47          | Construction & Extraction                    | 91                   | 3                                 | 3.8%                              |
| 33          | Protective Service                           | 33                   | 1                                 | 3.6%                              |
| 29          | Healthcare Practitioners & Technical         | 0                    | 0                                 | 3.5%                              |
| 51          | Production                                   | 24                   | 1                                 | 3.3%                              |
| 37          | Building & Grounds Cleaning & Maintenance    | 14                   | 0                                 | 2.9%                              |
| 39          | Personal Care & Service                      | <10                  | N/A                               | 2.8%                              |
| 53          | Transportation & Material Moving             | 129                  | 2                                 | 1.9%                              |
| 35          | Food Preparation & Serving Related           | <10                  | N/A                               | 1.2%                              |

Remote Work Capability for Sector Employed in Industry - 26,186 Estimated Remote Capability - 3,330 Percent of Occupation Family Posted Remote - 12.7%

#### **AUTOMATION INDEX**

The automation index measures the potential to automate in order to leverage the productivity of scarce labor. It is presented on an index with a base of 100 – occupations with a score above 100 have a greater-than-average potential for automation, and occupations with a score below 100 have a lower-than-average potential to automate. Occupations where the automation index number is above 100 may present opportunity to think about capital investments that can partly solve labor shortage problems.

Automation seldom replaces workers 1:1. Generally, automation has the potential to leverage productivity, allowing a business to produce the same or more output with fewer people.

| SOC        | <b>Description</b>                           | Employed in Sector | Automation<br>Index |
|------------|--|--------------------|---------------------|
| 35         | Food Preparation & Serving Related           | <10                | 125.9               |
| 47         | Construction & Extraction                    | 91                 | 123.1               |
| 37         | Building & Grounds Cleaning & Maintenance    | 14                 | 122.5               |
| 51         | Production                                   | 24                 | 113.8               |
| 53         | Transportation & Material Moving             | 129                | 110.9               |
| 45         | Farming, Fishing, & Forestry                 | 0                  | 110.0               |
| 49         | Installation, Maintenance, & Repair          | 4,407              | 108.9               |
| 33         | Protective Service                           | 33                 | 98.7                |
| 43         | Office & Administrative Support              | 3,522              | 98.1                |
| 39         | Personal Care & Services                     | <10                | 96.1                |
| 41         | Sales & Related                              | 4,144              | 95.0                |
| 31         | Healthcare Support                           | <10                | 95.0                |
| 27         | Arts, Design, Entertainment, Sports, & Media | 1,951              | 89.7                |
| 13         | Business & Financial Operations              | 3,262              | 89.5                |
| 29         | Healthcare Practitioners & Technical         | 0                  | 88.3                |
| 1 <i>7</i> | Architecture & Engineering                   | 2,105              | 87.0                |
| 25         | Educational Instruction & Library            | <10                | 85.9                |
| 11         | Management                                   | 1,234              | 85.1                |
| 15         | Computer & Mathematical                      | 5,190              | 83.4                |
| 21         | Community & Social Service                   | 0                  | 82.3                |
|            |  |                    |                     |

#### APPRENTICEABLE OCCUPATIONS

Many occupations are apprenticeable, and businesses can work with the local workforce centers to create apprenticeship pathways that help to ensure a steady supply of workers with the skills the industry actually needs.

An apprenticeship is an industry-driven, high-quality career pathway where employers can develop and prepare their future workforce, and individuals can obtain paid work experience, classroom instruction, and a portable, nationally-recognized credential. Find information and resources on the <u>A/D Works! website</u>.

| SOC<br>Code | Description   | Employed<br>in<br>Industry | Percent of<br>Total Jobs<br>in Sector | Median<br>Hourly<br>Earnings | Currently<br>Apprenticeable* |
|-------------|---|----------------------------|---------------------------------------|------------------------------|------------------------------|
| 11-1021     | General & Operations Managers   | 293                        | 1.1%                                  | \$60.37                      | Yes                          |
| 13-1161     | Market Research Analysts & Marketing Specialists  | 595                        | 2.3%                                  | \$34.11                      | Yes                          |
| 13-1198     | Project Management Specialists & Business Operations Specialists, All Other                       | 1,436                      | 5.5%                                  | \$40.16                      | Yes                          |
| 13-2011     | Accountants & Auditors  | 326                        | 1.2%                                  | \$37.08                      | Yes                          |
| 15-1231     | Computer Network Support Specialists  | 723                        | 2.8%                                  | \$34.23                      | Yes                          |
| 15-1232     | Computer User Support Specialists   | 467                        | 1.8%                                  | \$27.76                      | Yes                          |
| 15-1241     | Computer Network Architects   | 895                        | 3.4%                                  | \$59.13                      | Yes                          |
| 15-1244     | Network & Computer Systems Administrators   | 751                        | 2.9%                                  | \$42.81                      | Yes                          |
| 15-1256     | Software Developers & Software Quality Assurance<br>Analysts & Testers                            | 1,292                      | 4.9%                                  | \$53.14                      | Yes                          |
| 15-1299     | Computer Occupations, All Other   | 292                        | 1.1%                                  | \$50.03                      | Yes                          |
| 17-2072     | Electronics Engineers, Except Computer  | 1,806                      | 6.9%                                  | \$55.43                      | Yes                          |
| 27-2012     | Producers & Directors   | 448                        | 1.7%                                  | \$30.30                      | Yes                          |
| 27-4012     | Broadcast Technicians   | 344                        | 1.3%                                  | \$27.23                      | Yes                          |
| 41-1012     | First-Line Supervisors of Non-Retail Sales Workers  | 411                        | 1.6%                                  | \$41.35                      | No                           |
| 41-3091     | Sales Representatives of Services, Except Advertising,<br>Insurance, Financial Services, & Travel | 2,819                      | 10.7%                                 | \$31.12                      | No                           |
| 43-1011     | First-Line Supervisors of Office & Administrative Support Workers                                 | 275                        | 1.0%                                  | \$29.42                      | No                           |
| 43-4051     | Customer Service Representatives  | 1,863                      | 7.1%                                  | \$17.56                      | Yes                          |
| 49-1011     | First-Line Supervisors of Mechanics, Installers, & Repairers                                      | 423                        | 1.6%                                  | \$36.07                      | No                           |
| 49-2022     | Telecommunications Equipment Installers & Repairers,<br>Except Line Installers                    | 2,450                      | 9.3%                                  | \$30.79                      | Yes                          |
| 49-9052     | Telecommunications Line Installers & Repairers  | 1,078                      | 4.1%                                  | \$24.64                      | Yes                          |

### TRAINING PIPELINE

TRAINING PIPELINE

A good way to assess the ongoing strength of the training pipeline in the region is to compare number of people who completed a training program in the occupation (regional completions) with the average number of annual openings in that occupation.

If there are more openings than there are completions, then there is a shortfall. Employers may wish to work with regional workforce development centers such as Arapahoe/Douglas Works! and area educators to address shortfalls in critical occupations using a variety of strategies.

| SOC<br>Code | Description   | 2021 Jobs | Average<br>Annual<br>Openings | Regional<br>Completions | Surplus/<br>(Shortfall) | Typical On-the-Job<br>Training | Typical Entry Level Education |
|-------------|---|-----------|-------------------------------|-------------------------|-------------------------|--------------------------------|-------------------------------|
| 41-3091     | Sales Representatives of Services, Except Advertising,<br>Insurance, Financial Services, & Travel | 27,983    | 3,643                         | 156                     | (3,487)                 | Moderate-term                  | HS Diploma or Equivalent      |
| 15-1256     | Software Developers & Software Quality Assurance<br>Analysts & Testers                            | 50,056    | 5,808                         | 3,626                   | (2,182)                 | None                           | Bachelor's Degree             |
| 41-1012     | First-Line Supervisors of Non-Retail Sales Workers  | 6,841     | 670                           | 10                      | (660)                   | None                           | HS Diploma or Equivalent      |
| 49-2022     | Telecommunications Equipment Installers & Repairers,<br>Except Line Installers                    | 3,407     | 434                           | 245                     | (189)                   | Moderate-term                  | Postsecondary Nondegree       |
| 49-9052     | Telecommunications Line Installers & Repairers  | 1,608     | 211                           | 243                     | 32                      | Long-term                      | HS Diploma or Equivalent      |
| 27-4012     | Broadcast Technicians   | 699       | 79                            | 152                     | 73                      | Short-term                     | Associate's Degree            |
| 17-2072     | Electronics Engineers, Except Computer  | 6,213     | 485                           | 1,204                   | 719                     | None                           | Bachelor's Degree             |
| 27-2012     | Producers & Directors   | 1,879     | 209                           | 1,287                   | 1,078                   | None                           | Bachelor's Degree             |
| 49-1011     | First-Line Supervisors of Mechanics, Installers, & Repairers                                      | 8,673     | 935                           | 2,271                   | 1,336                   | None                           | HS Diploma or Equivalent      |
| 15-1244     | Network & Computer Systems Administrators   | 11,514    | 949                           | 4,132                   | 3,183                   | None                           | Bachelor's Degree             |
| 15-1231     | Computer Network Support Specialists  | 4,079     | 405                           | 3,828                   | 3,423                   | None                           | Associate's Degree            |
| 15-1241     | Computer Network Architects   | 6,194     | 468                           | 4,120                   | 3,652                   | None                           | Bachelor's Degree             |
| 15-1299     | Computer Occupations, All Other   | 11,969    | 1,162                         | 8,236                   | 7,074                   | Moderate-term                  | Bachelor's Degree             |
| 13-2011     | Accountants & Auditors  | 35,865    | 3,885                         | 12,063                  | 8,178                   | None                           | Bachelor's Degree             |
| 43-4051     | Customer Service Representatives  | 44,606    | 6,184                         | 15,221                  | 9,037                   | Short-term                     | HS Diploma or Equivalent      |
| 13-1161     | Market Research Analysts & Marketing Specialists  | 20,905    | 2,766                         | 12,746                  | 9,980                   | None                           | Bachelor's Degree             |
| 43-1011     | First-Line Supervisors of Office & Administrative Support<br>Workers                              | 20,206    | 2,293                         | 16,743                  | 14,450                  | None                           | HS Diploma or Equivalent      |
| 11-1021     | General & Operations Managers   | 32,731    | 3,590                         | 18,053                  | 14,463                  | None                           | Bachelor's Degree             |
| 13-1198     | Project Management Specialists & Business Operations<br>Specialists, All Other                    | 51,871    | 4,714                         | 19,354                  | 14,640                  | None                           | Bachelor's Degree             |
| 15-1232     | Computer User Support Specialists   | 15,409    | 1,555                         | 18,412                  | 16,857                  | None                           | Some college, no degree       |

#### TOP JOBS

#### Top 10 Occupations Currently Listed in the Colorado Central Planning Region

#### Click on the icon to learn more about the occupation

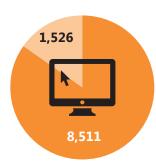




1,964

11.003

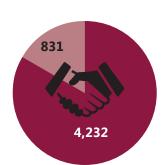
Software Developers & Software Quality Assurance Analysts & Testers



Computer Occupations, All Other



**Retail Salespersons** 



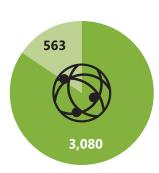
Personal Service Managers, All Other; Entertainment & Recreation Managers, Except Gambling; & Managers, All Other



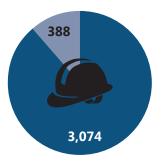
Marketing Managers



Sales
Representatives,
Wholesale &
Manufacturing,
Except Technical &
Scientific Products



Computer Network Architects



Telecommunications
Equipment Installers & Repairers, Except Line
Installers
Source: EMSI Burning Glass



General & Operations Managers



**Sales Managers** 

#### **JOB POSTING ANALYTICS**

The top companies and certifications required by employers in this Sector are shown below. The job listings section shows the top websites where businesses in this sector list their open jobs. Job Families are groups of occupations based upon work performed, skills, education, training, and credentials. The top 5 job families, measured by percent of total employment in the Sector are shown at the bottom right.

Click on the company to go to their career page and see what openings they currently have.

Click on the certification name to learn more about it.

## Companies

- 1 Dish Network
- 2 Spectrum
- 3 Comcast
- 4 Verizon Communications
- **5** Zayo Group

Click on the job listing to go to the job search website and see what openings they currently have.

## **JOB LISTINGS**

- 1 Dejobs.org
- 2 Indeed.com
- Recruiternetworks.com
- 4 Simplyhired.com
- 5 Dish.com

## Certifications

- 1 Master Of Business Administration (MBA)
- 2 Certified Plant Engineer
- 3 Cisco Certified Network Associate
- Cisco Certified Network Professional
- Bachelor Of Science in Business

Click on the job family to see the groups of occupations and learn more about those occupations using O\*Net OnLine.

## JOB FAMILY

- 1 Computer and Mathematical
- 2 Installation, Maintenance, and Repair
- 3 Sales and Related
- Office and Administrative Support
- 5 Business and Financial Operations



## TOP HARD SKILLS IN SECTOR

The table below lists the top 20 hard skills from EMSI Burning Glass demanded by employers in the Sector during the last calendar year. This is matched against the number of online profiles that have been updated sometime in the last year that also list those hard skills. This can give employers and job seekers thinking of entering the sector an idea of where the greatest opportunities exist in upskilling, next skilling and reskilling.

| Skills  1 Customer Experience | Postings<br>2,685 | % of Total<br>Postings<br>17.2% | Online<br>Profiles<br>2,252 | % of Total<br>Online<br>Postings<br>6.8% |
|-------------------------------|-------------------|---------------------------------|-----------------------------|--|
| 2 Telecommunications          | 2,220             | 14.2%                           | 7,954                       | 23.9%                                    |
| 3 Automation                  | 2,107             | 13.5%                           | 1,245                       | 3.7%                                     |
| 4 Computer Science            | 2,091             | 13.4%                           | 93                          | 0.3%                                     |
| 5 Agile Methodology           | 1,795             | 11.5%                           | 2,376                       | 7.1%                                     |
| 6 Python                      | 1,641             | 10.5%                           | 1,120                       | 3.4%                                     |
| 7 Project Management          | 1,307             | 8.4%                            | 3,694                       | 11.1%                                    |
| 8 SQL (Programming Language)  | 1,294             | 8.3%                            | 2,473                       | 7.4%                                     |
| 9 Finance                     | 1,272             | 8.1%                            | 1,647                       | 4.9%                                     |
| 10 New Product Development    | 1,192             | 7.6%                            | 1,401                       | 4.2%                                     |
| 11 Amazon Web Services        | 1,155             | 7.4%                            | 666                         | 2.0%                                     |
| 12 Auditing                   | 1,124             | 7.2%                            | 1,490                       | 4.5%                                     |
| 13 Software Development       | 1,121             | 7.2%                            | 2,273                       | 6.8%                                     |
| 14 Scripting                  | 1,063             | 6.8%                            | 564                         | 1.7%                                     |
| 15 Network Routing            | 1,050             | 6.7%                            | 1,150                       | 3.5%                                     |
| 16 Product Management         | 1,049             | 6.7%                            | 2,167                       | 6.5%                                     |
| 17 Data Analysis              | 1,044             | 6.7%                            | 2,015                       | 6.1%                                     |
| 18 5G Technology              | 1,033             | 6.6%                            | 228                         | 0.7%                                     |
| 19 Process Improvement        | 1,014             | 6.5%                            | 3,274                       | 9.8%                                     |
| 20 Network Engineering        | 1,002             | 6.4%                            | 1,851                       | 5.6%                                     |
|                               |                   | LUD                             |                             |  |

BROADBAND





www.adworks.org



