



**Center for Business Analytics  
and Community Research**  
UNIVERSITY OF SOUTH CAROLINA UPSTATE

# **Industry, Talent and Skills Data**

**10-County Upstate Region and Beyond**

Sam Cooper and Mandhira Jeripothula

## **Topics:**

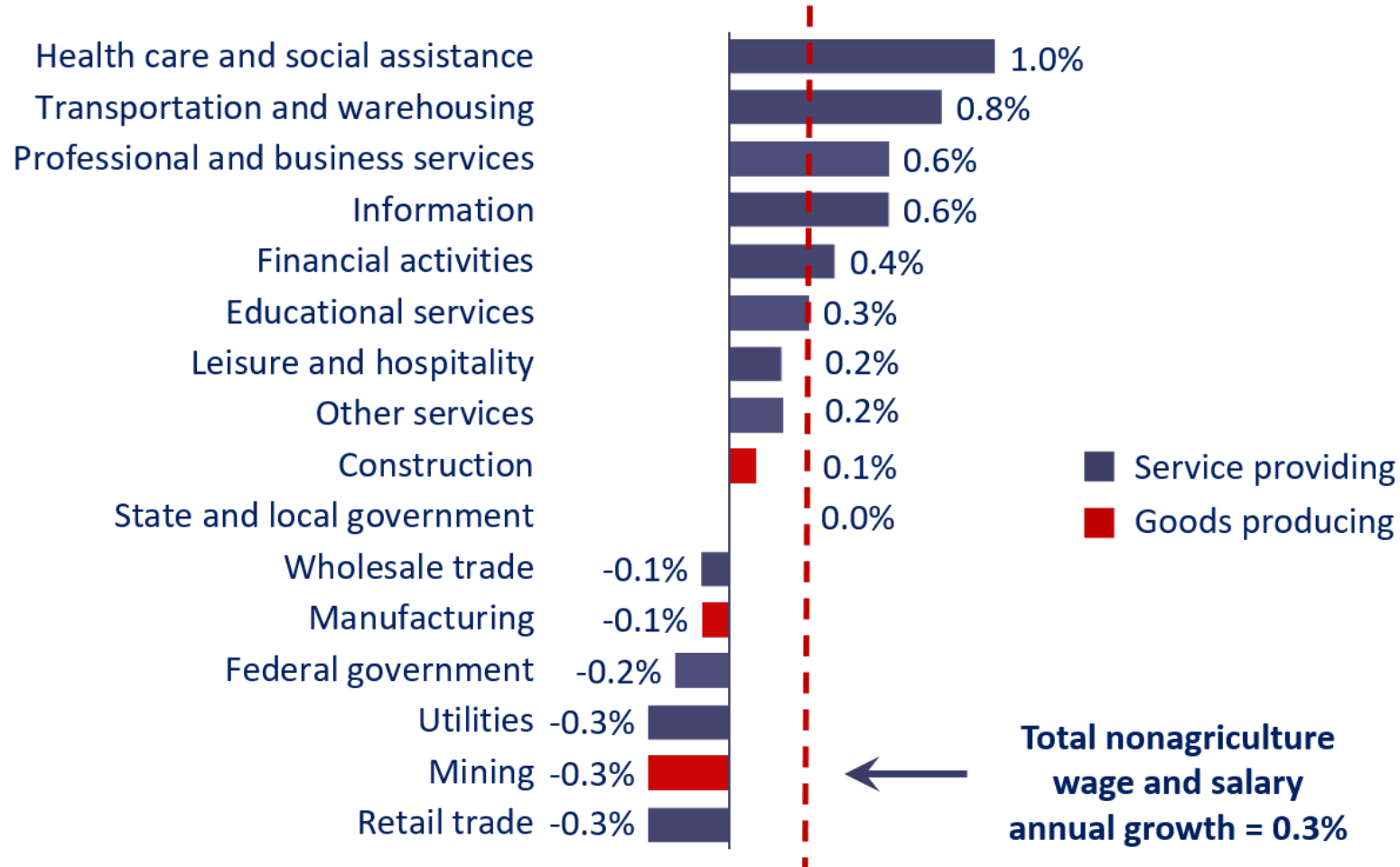
- National Trends
- South Carolina Trends
- Upstate Workforce & Industry Trends
- Upstate Job Postings, Educational Awards, and Skills Demand

# National Trends



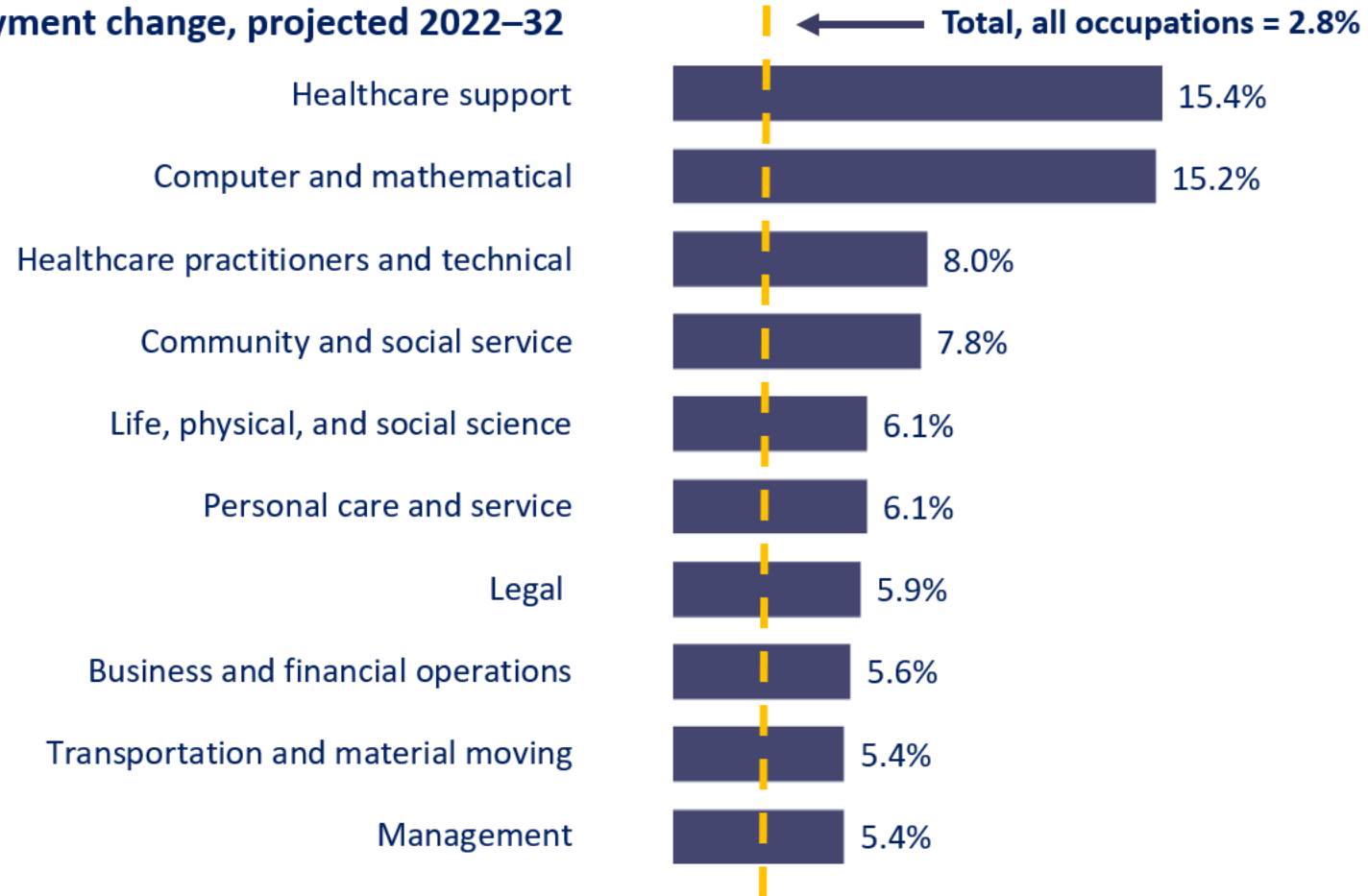
# Projected Annual Rate of Change in Industry Employment, 2022–32

Wage and salary compound annual rate of change, projected 2022–32



# Top 10 Occupational Groups Projected to Grow the Fastest

Percent employment change, projected 2022–32



# Top 10 Fastest Growing Occupations

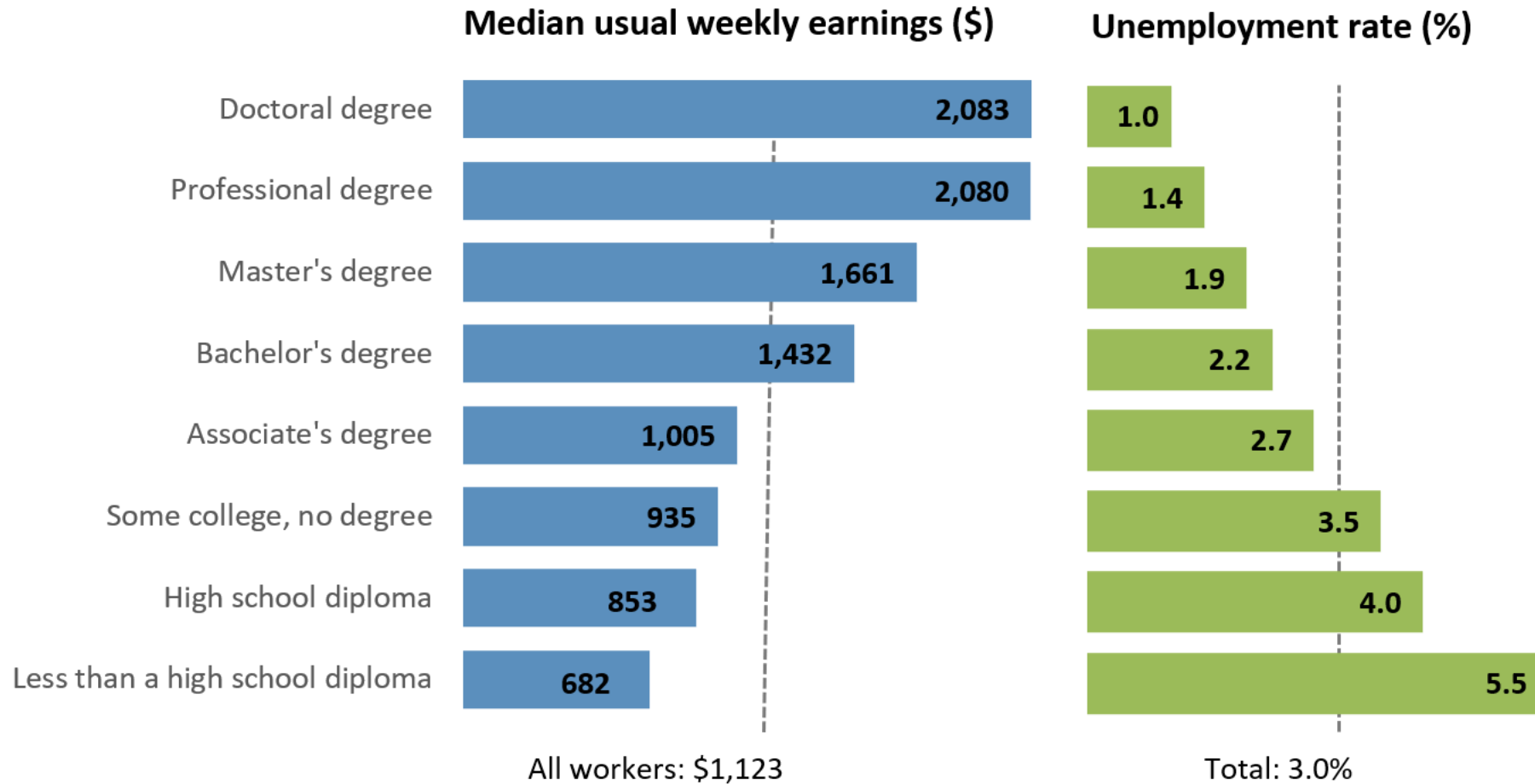
	Percent change, projected 2022–32	Employment change, projected 2022–32 (in thousands)	Median annual wage, May 2022
Wind turbine service technicians	44.9%	5.0	\$57,320
Nurse practitioners	44.5%	118.6	\$121,610
Data scientists	35.2%	59.4	\$103,500
Statisticians	31.6%	10.5	\$98,920
Information security analysts	31.5%	53.2	\$112,000
Medical and health services managers	28.4%	144.7	\$104,830
Epidemiologists	26.7%	2.7	\$78,520
Physician assistants	26.5%	39.3	\$126,010
Physical therapist assistants	26.1%	26.3	\$62,770
Software developers	25.7%	410.4	\$127,260

Note: Wage data are from the Occupational Employment and Wage Statistics program, U.S. Bureau of Labor Statistics.

Source: [Employment Projections Home Page](https://www.bls.gov/employment-projections) : U.S. Bureau of Labor Statistics (bls.gov)



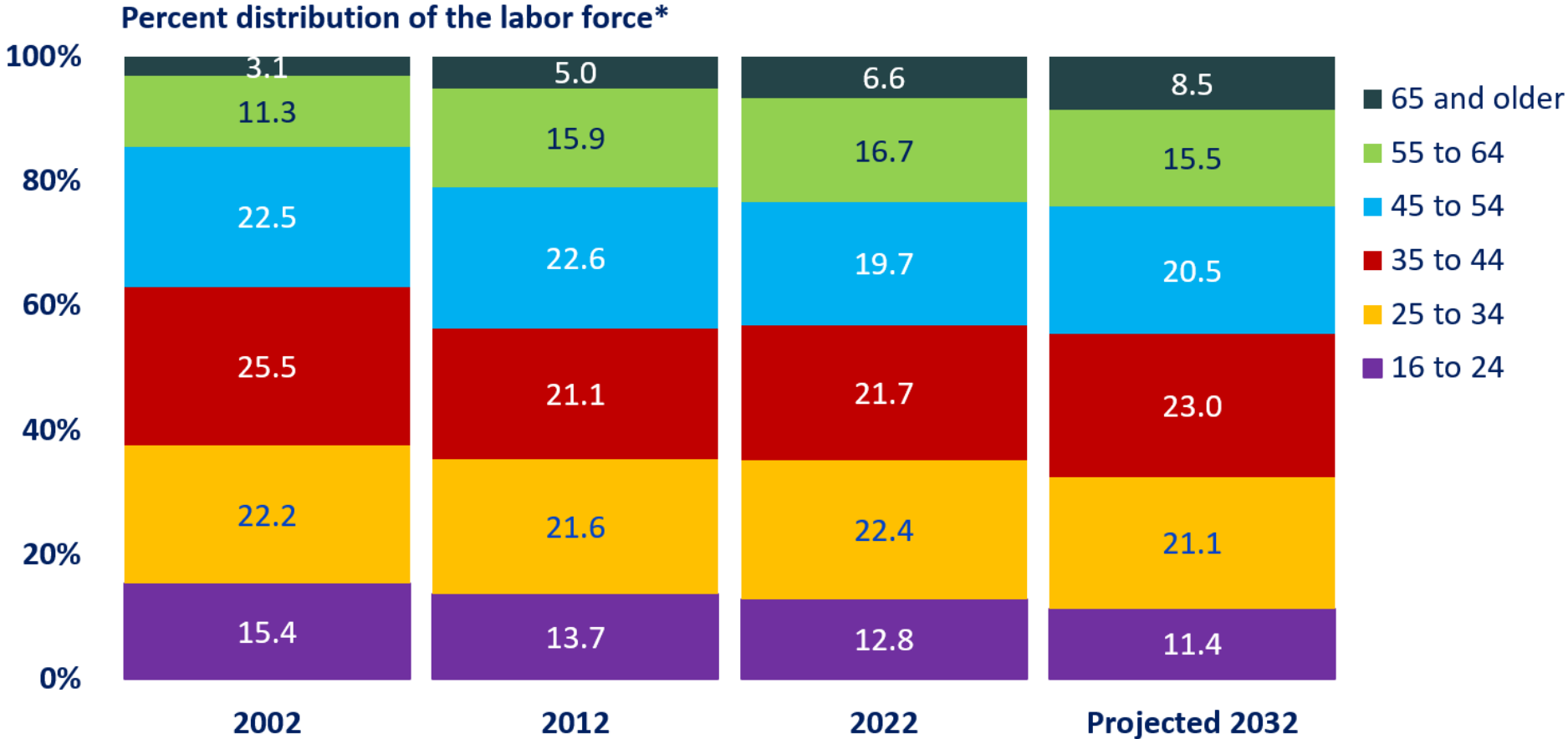
# Earnings and unemployment rates by educational attainment, 2022



Note: Data are for persons age 25 and over. Earnings are for full-time wage and salary workers.  
Source: U.S. Bureau of Labor Statistics, Current Population Survey.



# Labor Force Share, by Age Group, 2002, 2012, 2022, and Projected 2032



\*Data may not sum to 100 percent because of rounding

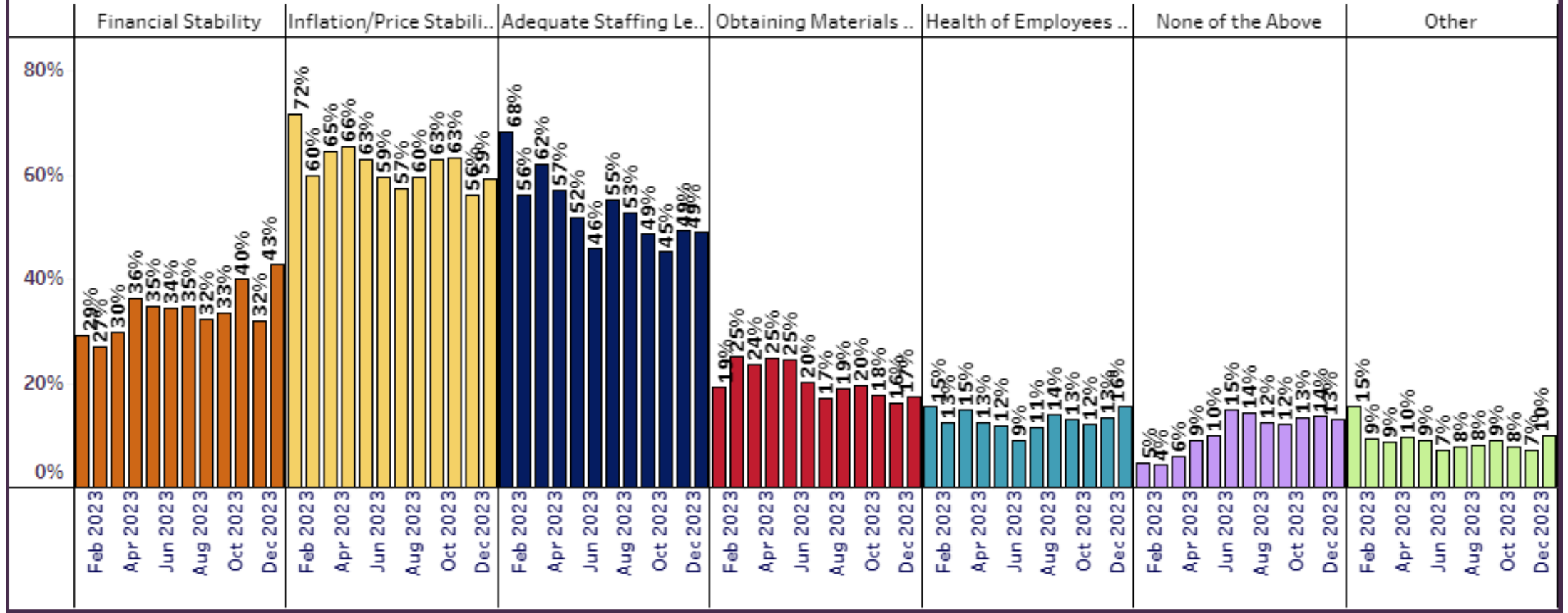




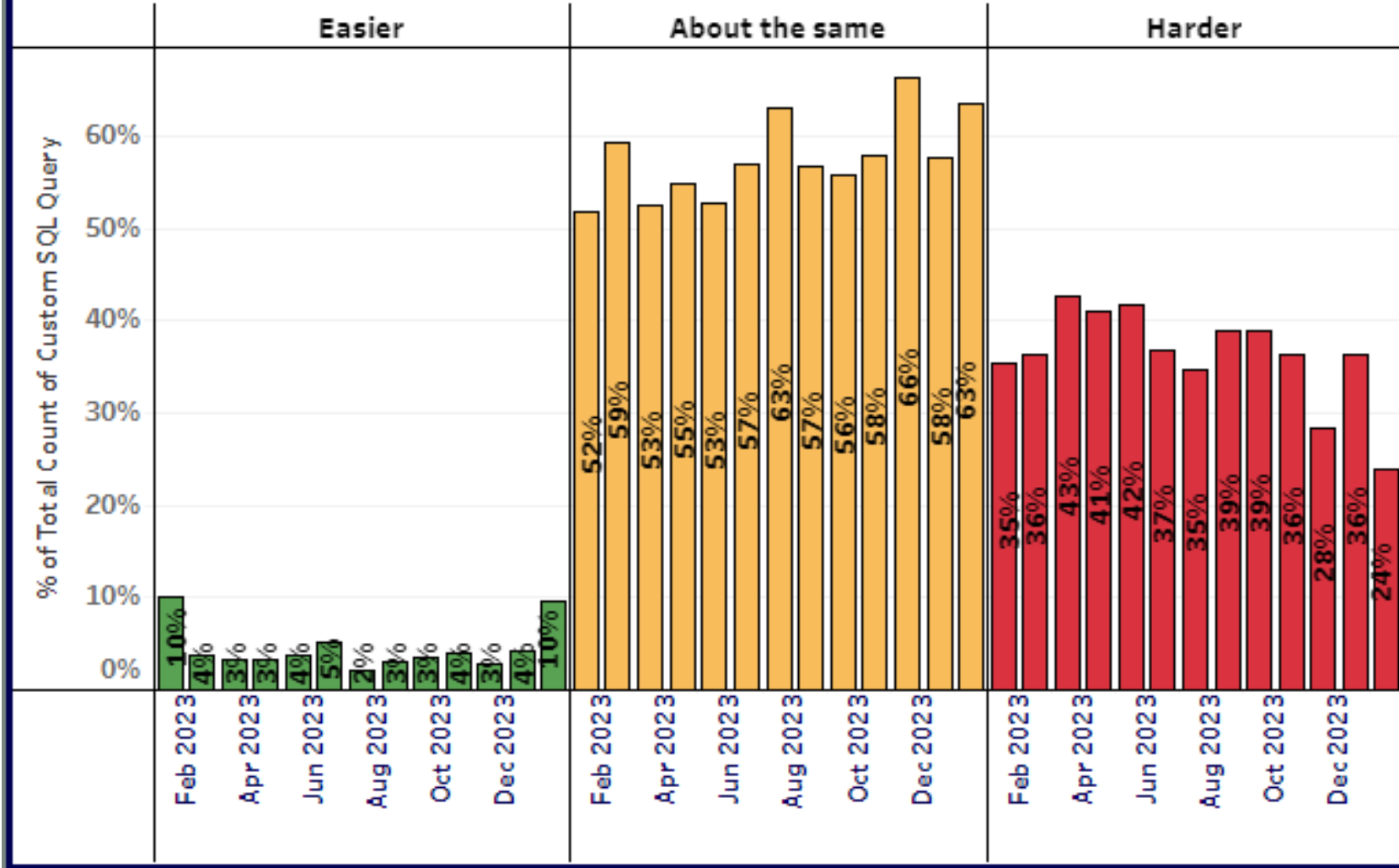
# South Carolina Trends



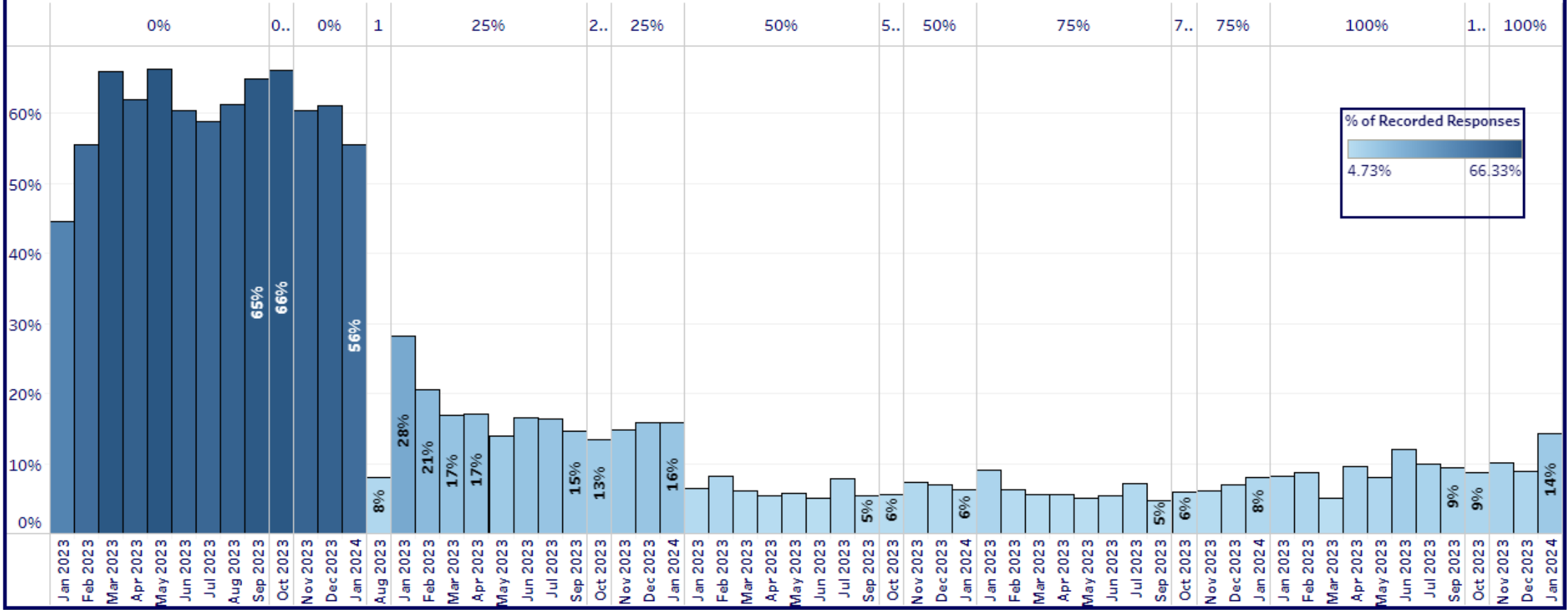
Do you currently have any concerns about any of the following aspects of your business? (Check all that apply.)



Looking forward, do you believe your ability to find qualified workers will be easier, about the same, or harder six months from now?



Over the past month, about what percentage of your workforce's time was spent working remotely?



# Largest Industry Sectors in South Carolina, Ranked by 5-Year Forecasted Talent Demand

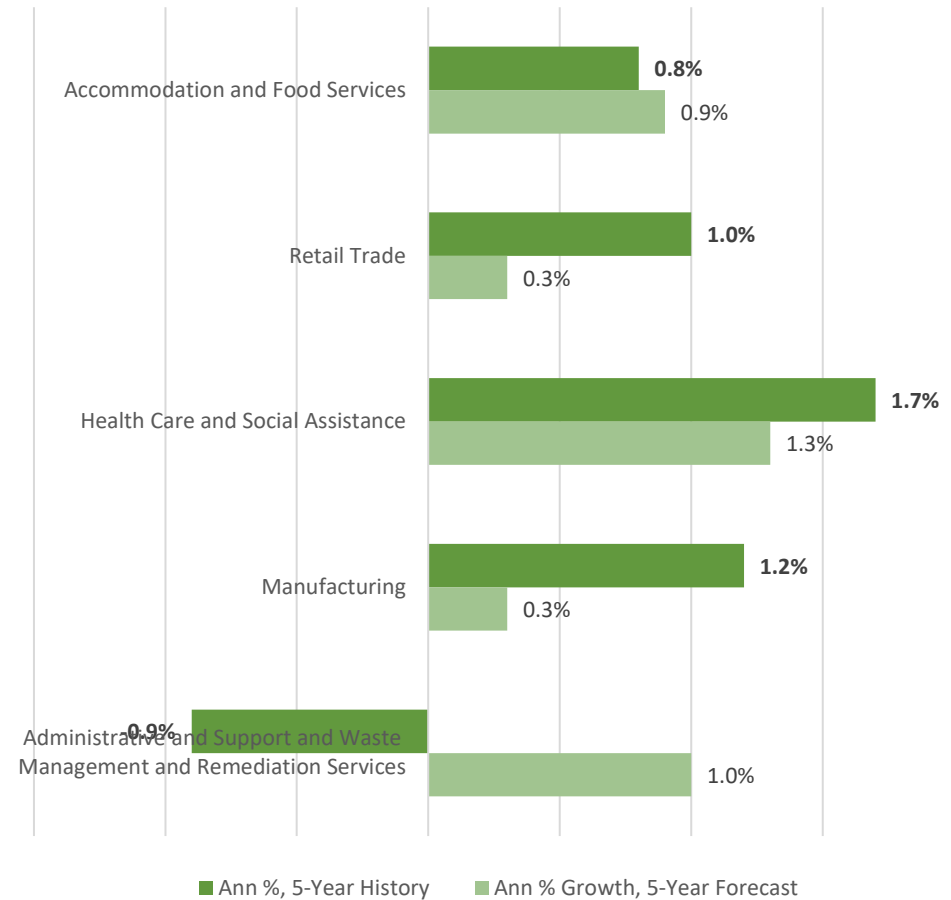
## Top 5 Industry Sectors by 5-Year Forecasted Total Talent Demand

Source: Chmura JobsEQ, 2023Q3



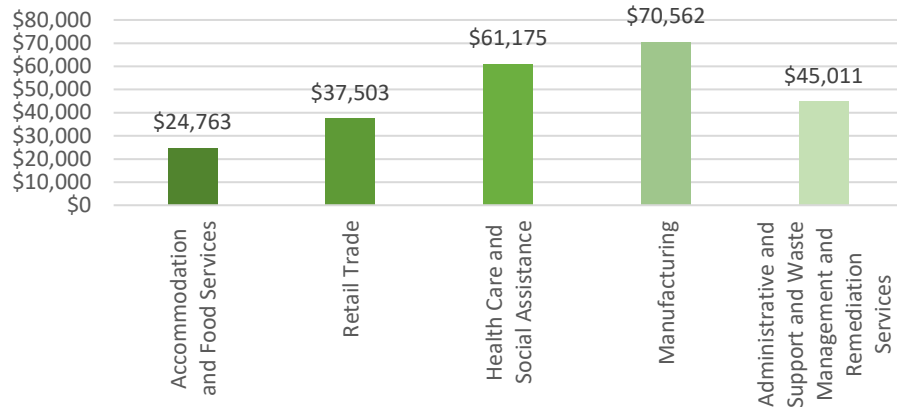
## Growth Rates, To 5 Industry Sectors Ranked by Total 5-Year Forecasted Total Talent Demand

Source: Chmura JobsEQ, 2023 Q3



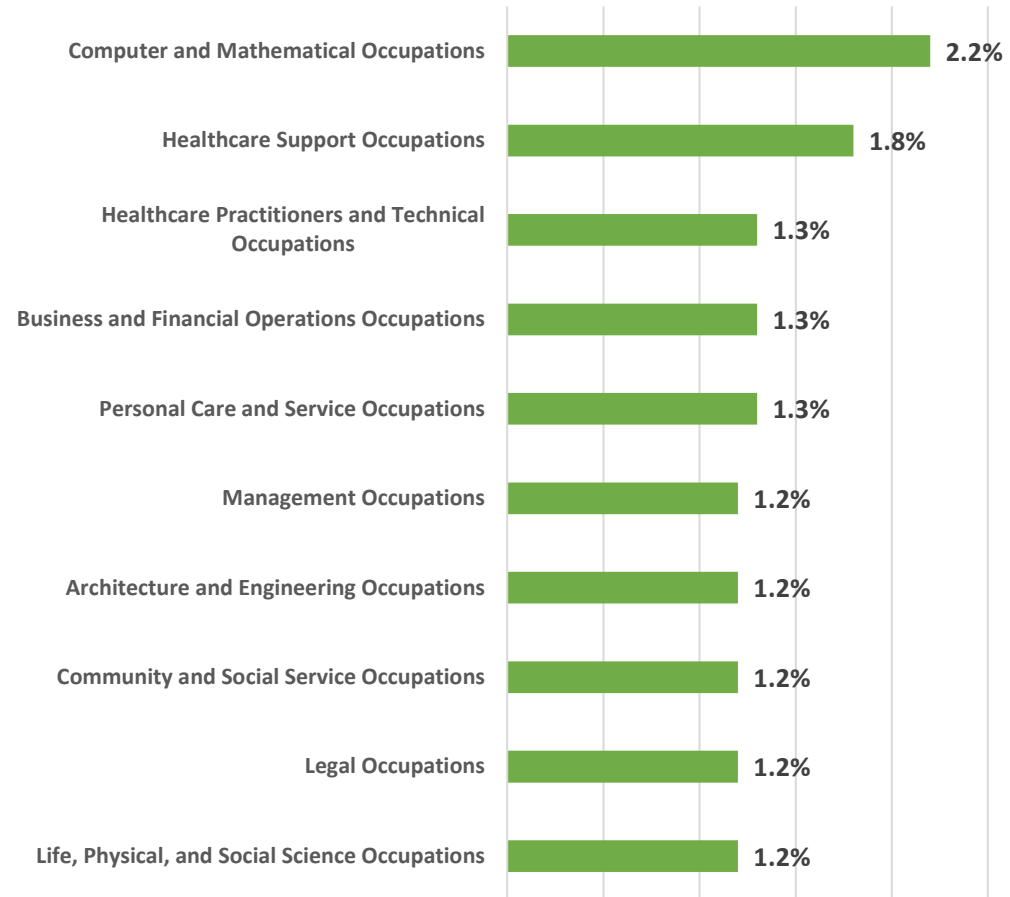
## Top 5 Industry Sectors, Current Average Annual Wages

Source: Chmura JobsEQ, 2023Q3



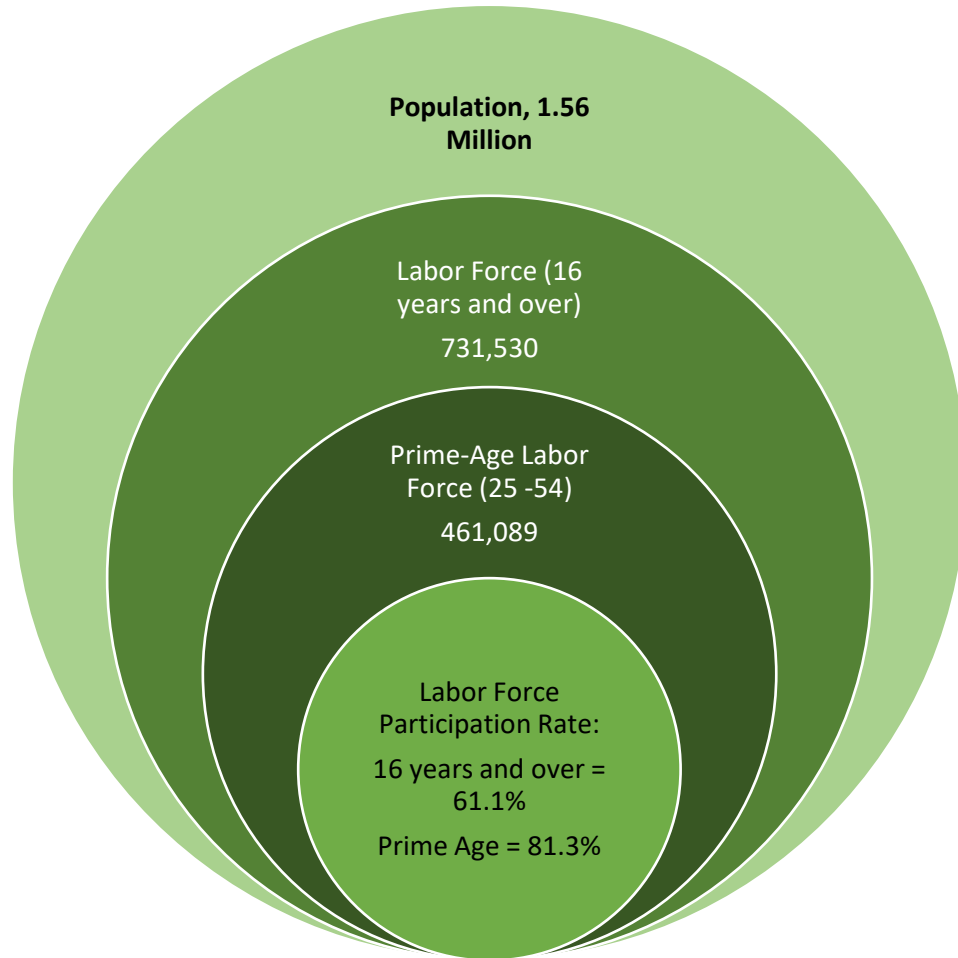
## Top 10 Occupational Groups Projected to Grow Fastest (Annual Rates), South Carolina 2023 - 2033

Source: Chmura JobsEQ, 2023Q3



# Upstate Workforce & Industry Trends





### Educational Attainment, Age 25 – 64

Source: Chmura JobsEQ

	10-County	South Carolina	USA
No High School Diploma	11.6%	10.2%	10.3%
High School Graduate	27.5%	28.1%	25.3%
Some College, No Degree	20.0%	20.5%	20.1%
Associate's Degree	11.3%	10.7%	9.3%
Bachelor's Degree	19.1%	19.7%	22.0%
Postgraduate Degree	10.6%	10.8%	13.1%





## Demographic, Economic, and Educational Data, page 2

### Cost of Living Index

Source: Chmura JobsEQ, 2023Q3

	Annual Average Salary	Cost of Living Index (Base US)	US Purchasing Power
<b>10 County Upstate Region</b>	\$54,233	90.8	\$59,724
<b>South Carolina</b>	\$56,383	93.3	\$60,461
<b>USA</b>	\$70,183	100.0	\$70,183

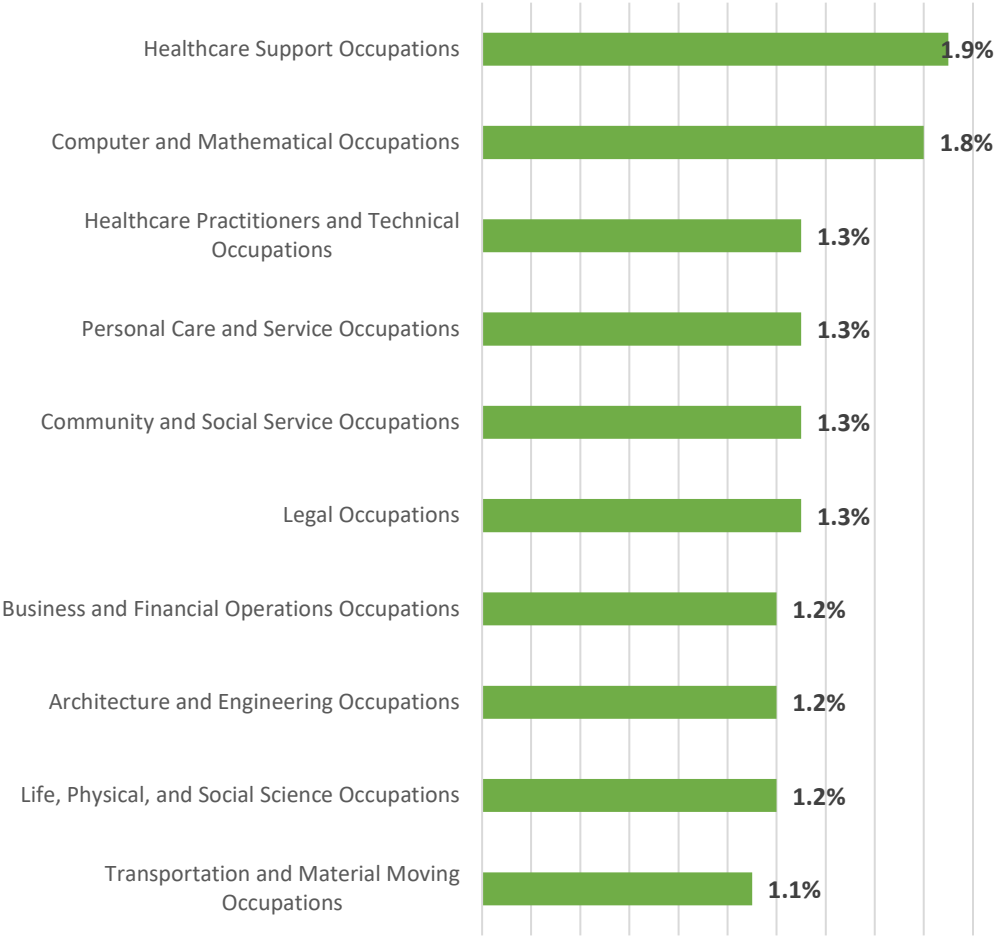
### Top 10 Sectors - Contribution to Regional GDP (in \$Millions)

Source: Chmura JobsEQ (2022)



# Top 10 Occupational Groups Projected to Grow Fastest, Upstate 2023 – 2033

Source: Chmura JobsEQ



# Largest Industry Sectors in Upstate South Carolina

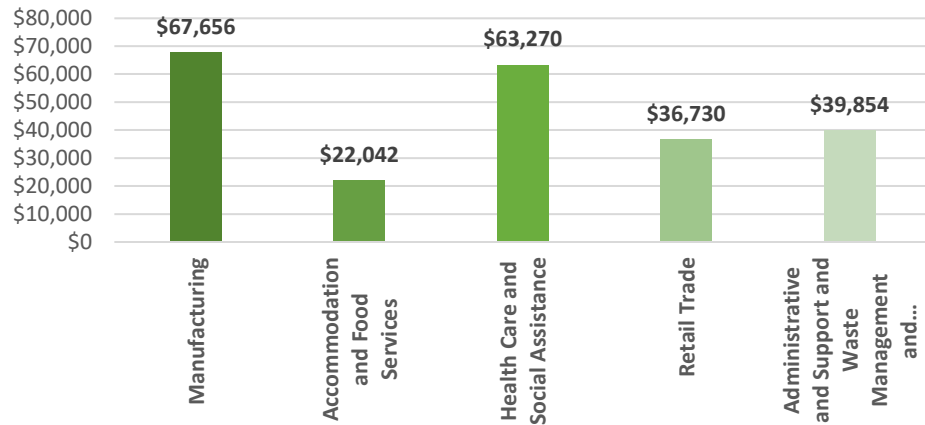
## Top 5 Industry Sectors by 5-Year Forecasted Total Talent Demand

Source: Chmura JobsEQ, 2023Q2



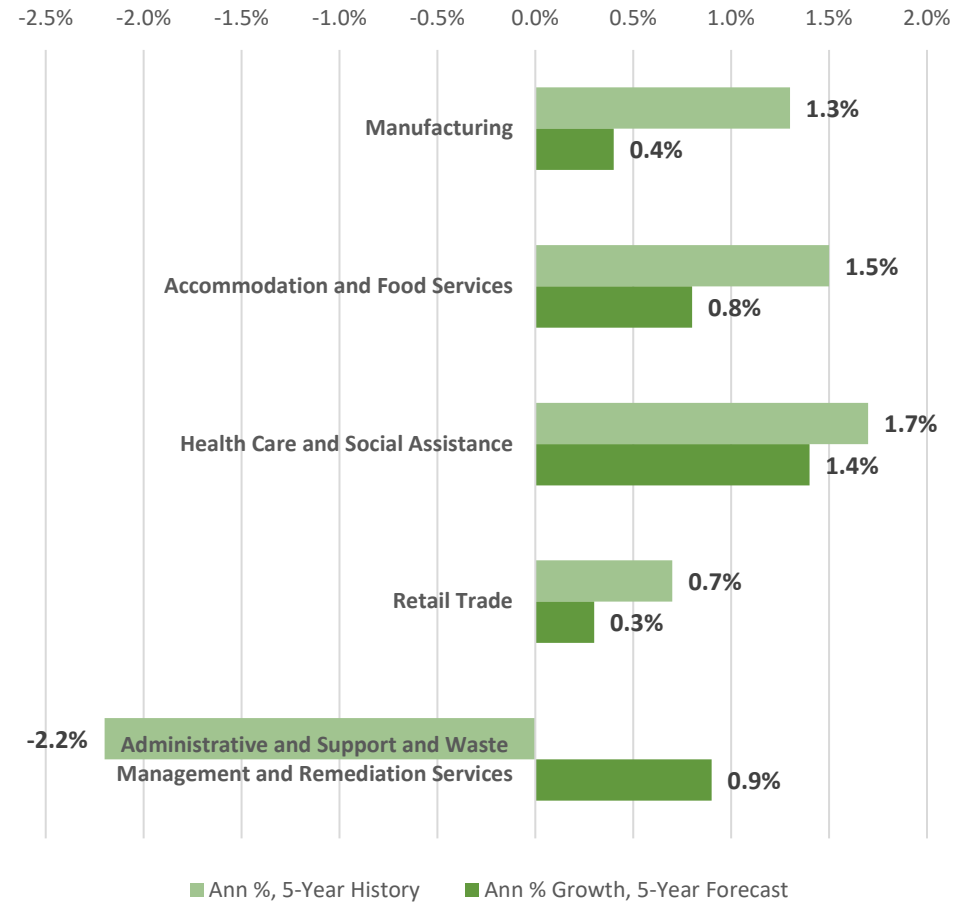
## Top 5 Industry Sectors, Current Average Annual Wages

Source: Chmura JobsEQ, 2023Q2



## Growth Rates, Top 5 Industry Sectors Ranked by Total 5-year Forecasted Total Talent Demand

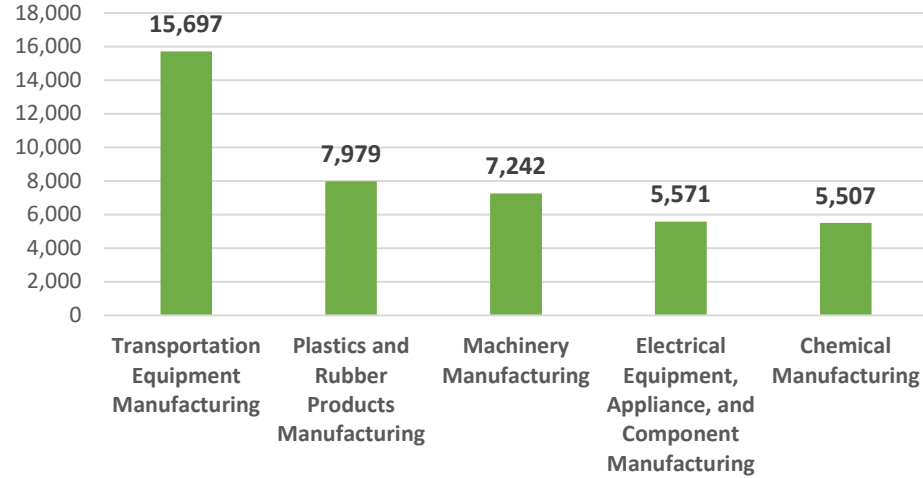
Source: Chmura JobsEQ, 2023Q2



# Manufacturing Sector

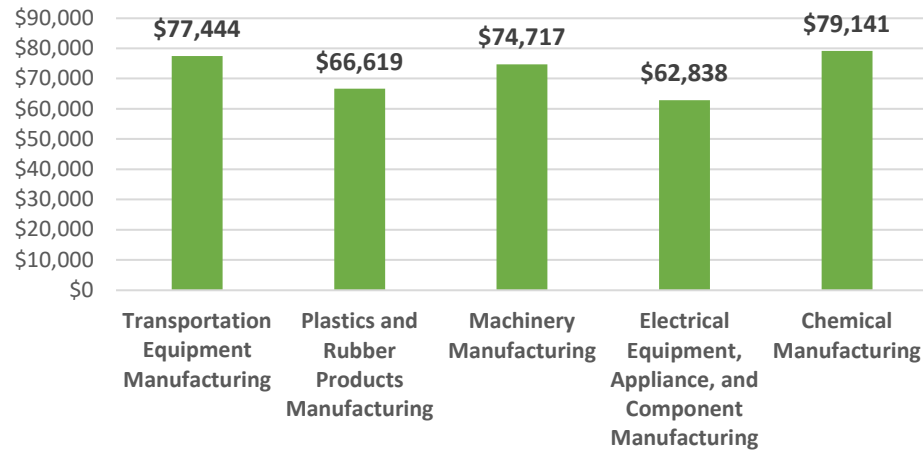
## Top 5 Manufacturing Sectors, Ranked on 5-Year Forecasted Total Demand

Source: Chmura JobsEQ, 2023Q2



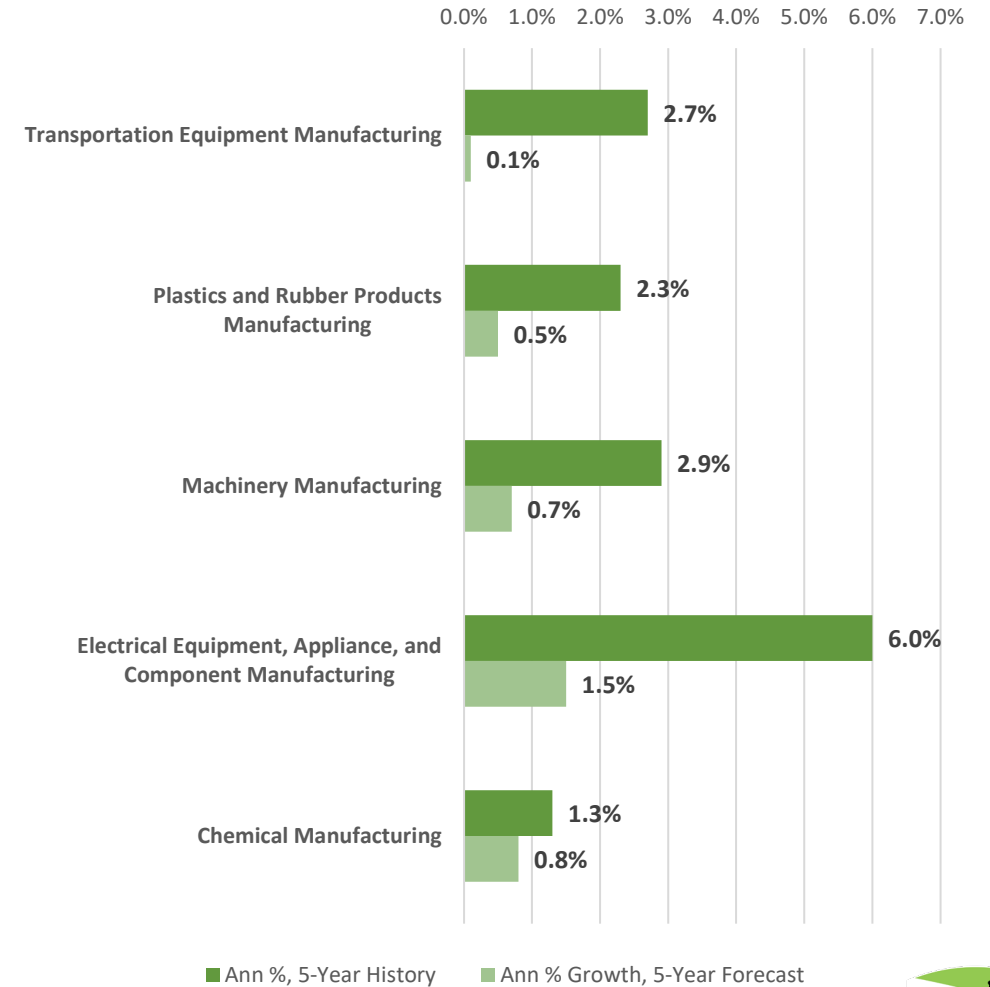
## Current Average Annual Wages

Source: Chmura JobsEQ, 2023Q2



## Growth Rates, Top 5 Manufacturing Sectors by 5-Year History & 5-Year Forecasted Demand

Source: Chmura JobsEQ, 2023Q2



## Occupation Distribution for Manufacturing 5-Year Forecast, 10-County Upstate Region

*Source: Chmura JobsEQ, 2023Q2*

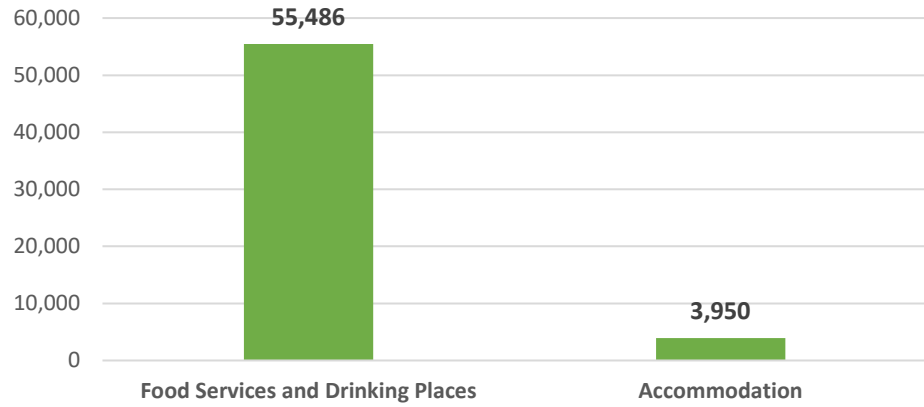
Occupation	Current Avg Ann Wages	Total Demand for New/Replacement Talent, 5- Year Forecast
Team Assemblers	\$ 46,700	8,889
Inspectors, Testers, Sorters, Samplers, and Weighers	\$ 44,600	3,035
First-Line Supervisors of Production and Operating Workers	\$ 70,800	2,603
Laborers and Freight, Stock, and Material Movers, Hand	\$ 37,700	3,287
Machinists	\$ 44,100	1,544
Welders, Cutters, Solderers, and Brazers	\$ 46,900	1,549
Industrial Engineers	\$ 93,100	1,034
Industrial Machinery Mechanics	\$ 58,600	1,478
Electrical, Electronic, and Electromechanical Equipment Assemblers, Except Coil Winders, Tapers, and Finishers	\$ 42,700	1,499
Sales Representatives, Wholesale and Manufacturing, Except Technical and Scientific Products	\$ 75,200	1,155



# Accommodation and Food Services

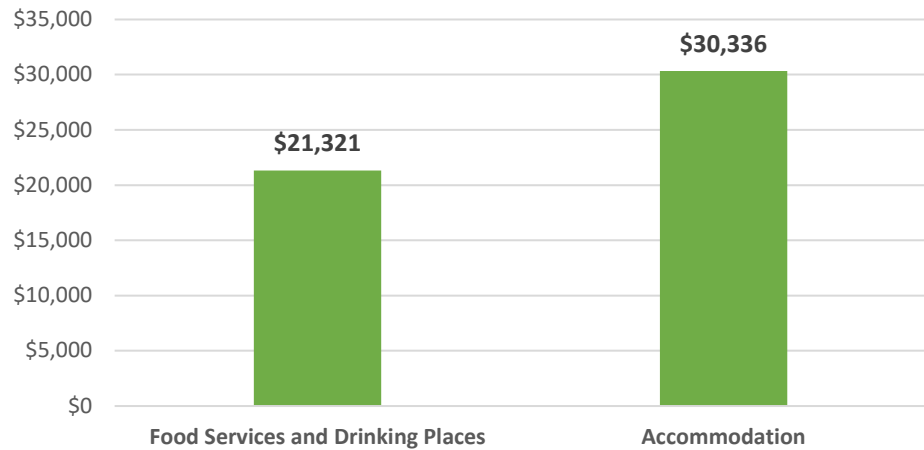
Accommodation and Food Services, Forecasted  
5-Year Total Demand

Source: Chmura JobsEQ



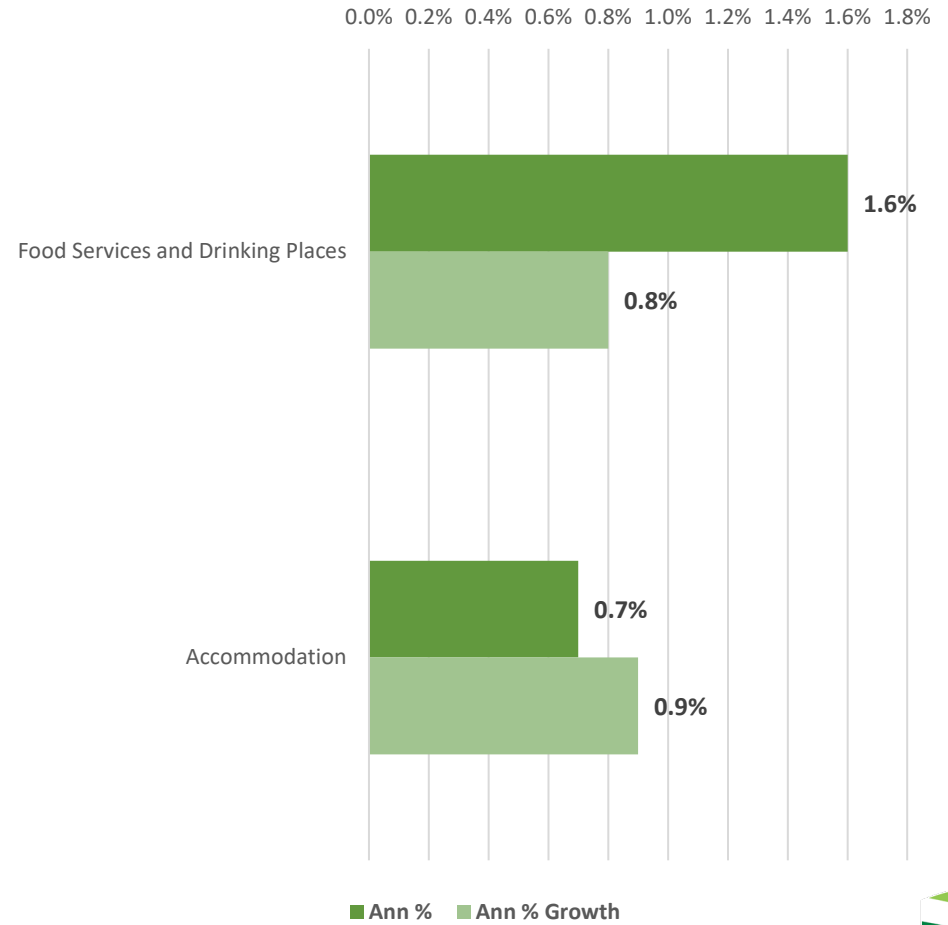
Current Average Annual Wages

Source: Chmura JobsEQ, 2023Q2



Growth Rates by Sector, 5-Year History & 5-Year Forecast

Source: Chmura JobsEQ, 2023Q2



## Occupation Distribution for Accommodations and Food Services 5-Year Forecast, 10-County Upstate Region

*Source: Chmura JobsEQ, 2023Q2*

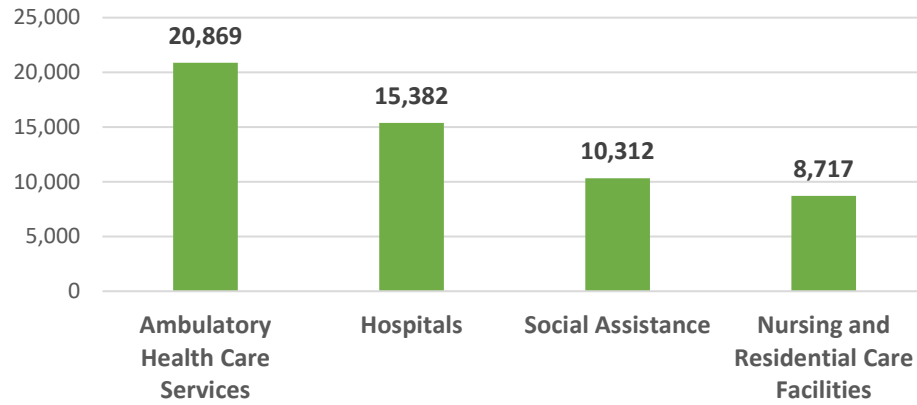
Occupation	Current Avg Ann Wages	Total Demand for New/Replacement Talent, 5- Year Forecast
Fast Food and Counter Workers	\$25,100	17,774
Waiters and Waitresses	\$23,300	10,152
Cooks, Restaurant	\$32,000	6,014
First-Line Supervisors of Food Preparation and Serving Workers	\$41,000	4,522
Cooks, Fast Food	\$26,700	2,859
Food Preparation Workers	\$28,200	2,398
Hosts and Hostesses, Restaurant, Lounge, and Coffee Shop	\$24,200	2,529
Cashiers	\$25,000	1,740
Bartenders	\$26,000	1,709
Dishwashers	\$25,800	1,564



# Health Care & Social Assistance

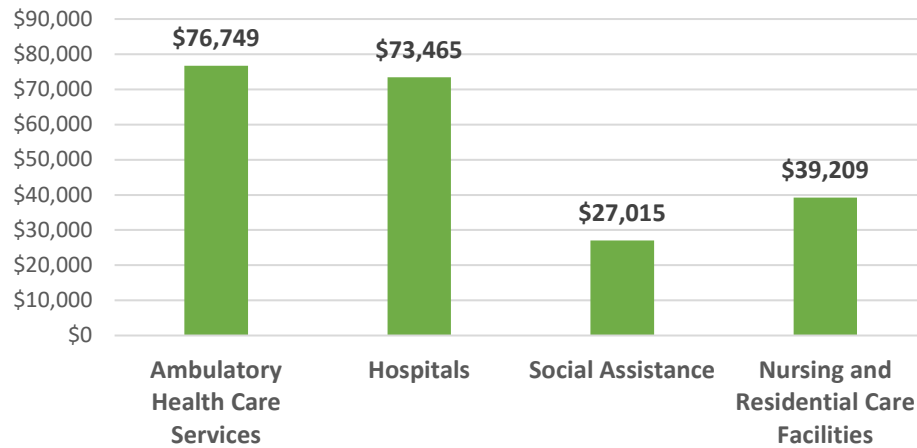
Health Care & Social Assistance Sectors, 5-Year Forecasted Total Demand

Source: Chmura JobsEQ, 2023Q2



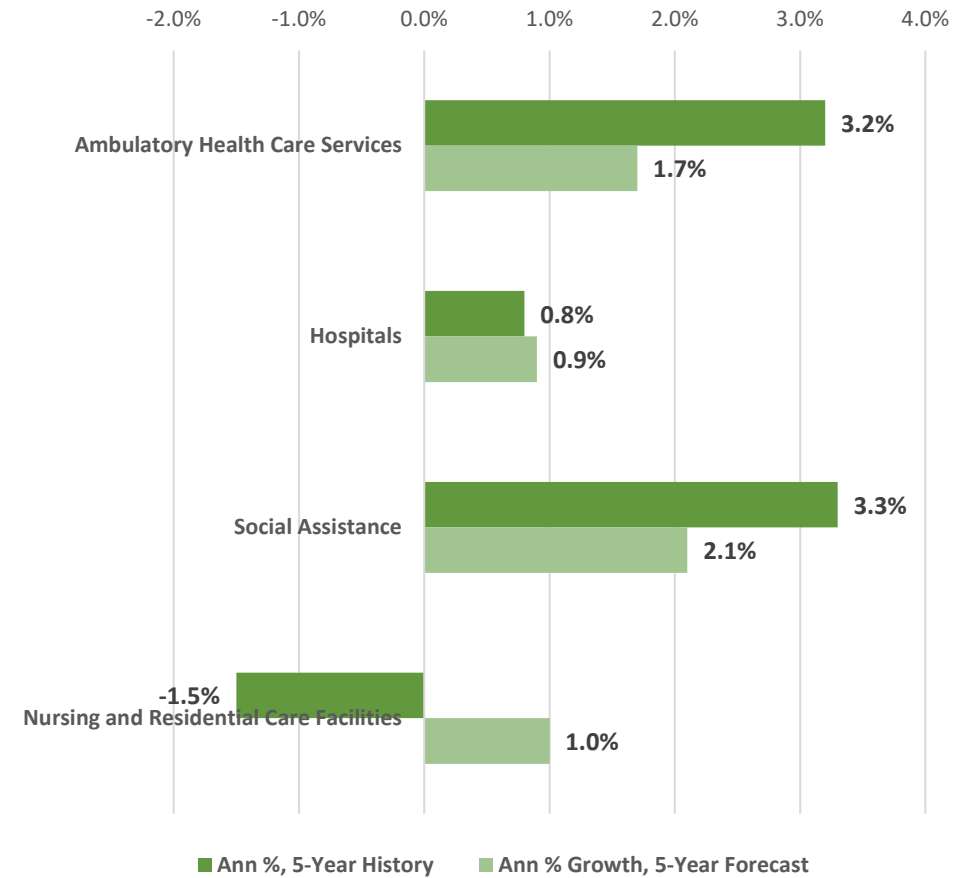
Current Average Annual Wages

Source: Chmura JobsEQ, 2023Q2



Growth Rates, Health Care & Social Assistance Sectors

Source: Chmura JobsEQ, 2023Q2





## Occupation Distribution for Health Care & Social Assistance 5-Year Forecast, 10-County Upstate Region

*Source: Chmura JobsEQ, 2023Q2*

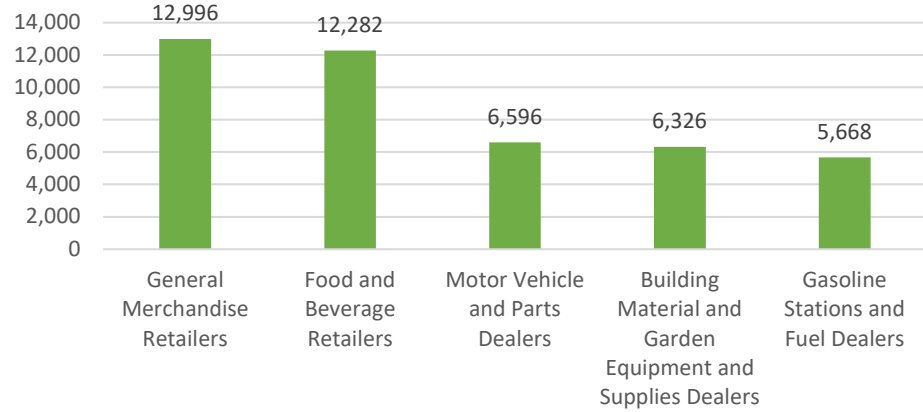
Occupation	Current Avg Ann Wages	Total Demand for New/Replacement Talent, 5- Year Forecast
Personal Care Aides	\$26,800	7,577
Nursing Assistants	\$34,000	4,632
Registered Nurses	\$77,200	4,174
Medical Assistants	\$38,800	2,868
Home Health Aides	\$26,800	2,243
Medical Secretaries and Administrative Assistants	\$39,100	1,768
Receptionists and Information Clerks	\$33,700	1,708
Childcare Workers	\$26,000	1,638
Dental Assistants	\$44,500	1,273
Licensed Practical and Licensed Vocational Nurses	\$53,400	1,272



# Retail Trade

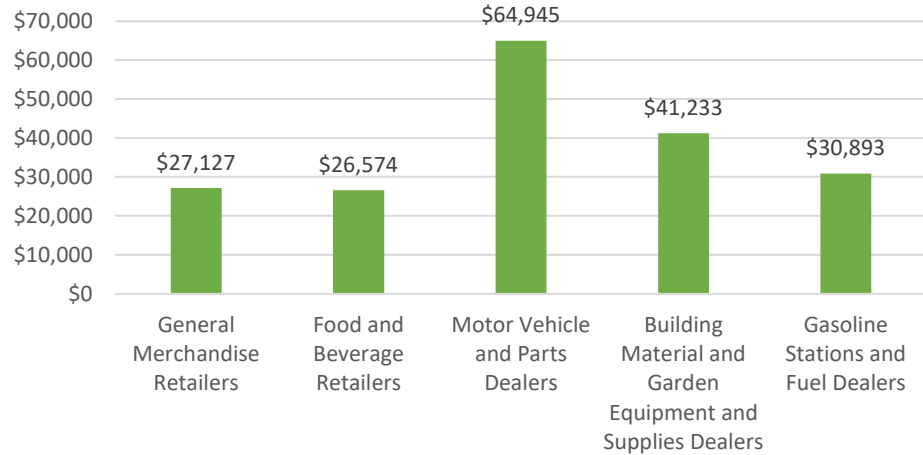
## Top 5 Retail Trade Sectors, Ranked on 5-Year Forecasted Total Demand

Source: Chmura JobsEQ, 2023Q2



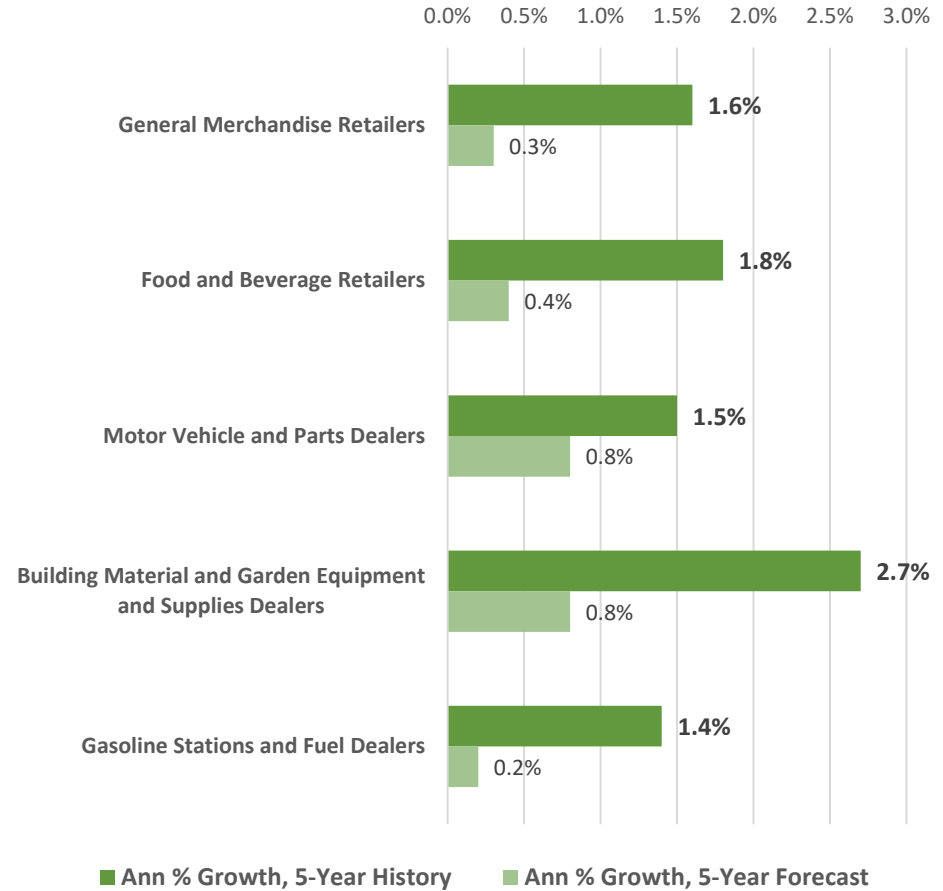
## Current Average Annual Wages

Source, Chmura JobsEQ, 2023Q2



## Growth Rates, Retail Trade Sectors

Source: Chmura JobsEQ, 2023Q2



## Occupation Distribution for Retail Trade 5-Year Forecast, 10-County Upstate Region

*Source: Chmura JobsEQ, 2023Q2*

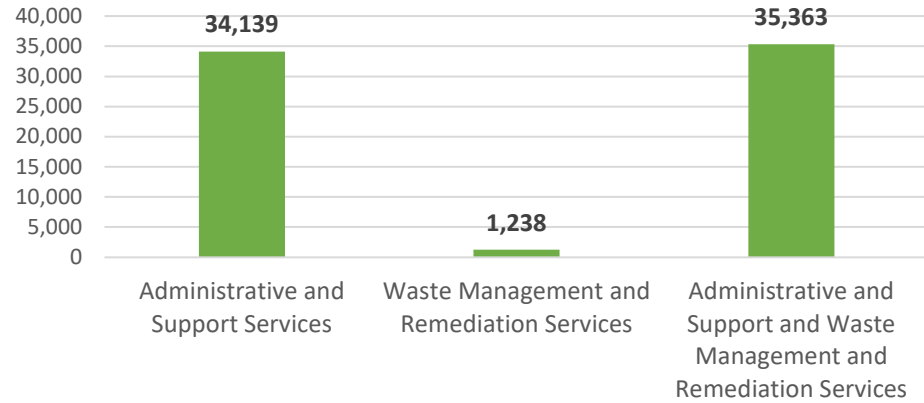
Occupation	Current Avg Ann Wages	Total Demand for New/Replacement Talent, 5- Year Forecast
Cashiers	\$25,700	12,971
Retail Salespersons	\$31,800	12,446
Stockers and Order Fillers	\$33,200	7,509
First-Line Supervisors of Retail Sales Workers	\$45,300	3,477
Customer Service Representatives	\$36,100	2,144
Laborers and Freight, Stock, and Material Movers, Hand	\$35,200	1,324
Fast Food and Counter Workers	\$24,800	1,119
Automotive Service Technicians and Mechanics	\$47,900	1,091
General and Operations Managers	\$91,300	939
Food Preparation Workers	\$27,600	937



# Administrative and Support & Waste Management and Remediation Services

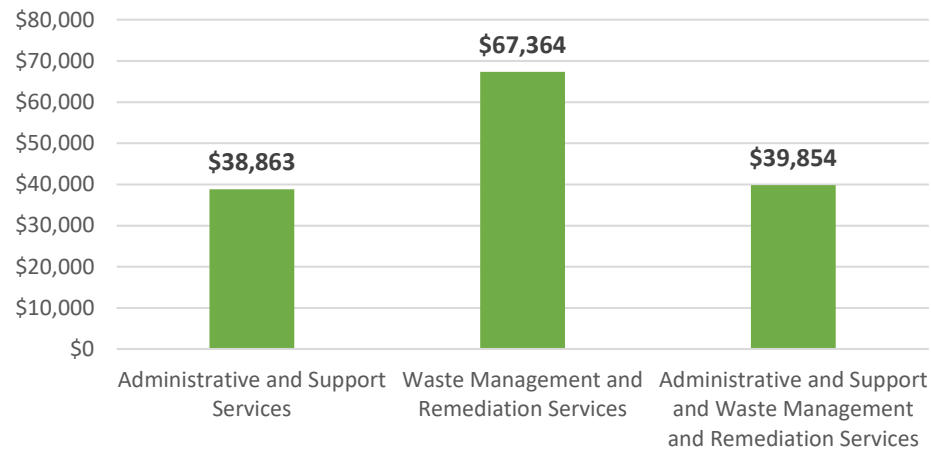
## Administrative, Support, and Waste Management Sectors, Forecasted Total Demand

Source: Chmura JobsEQ, 2023Q2



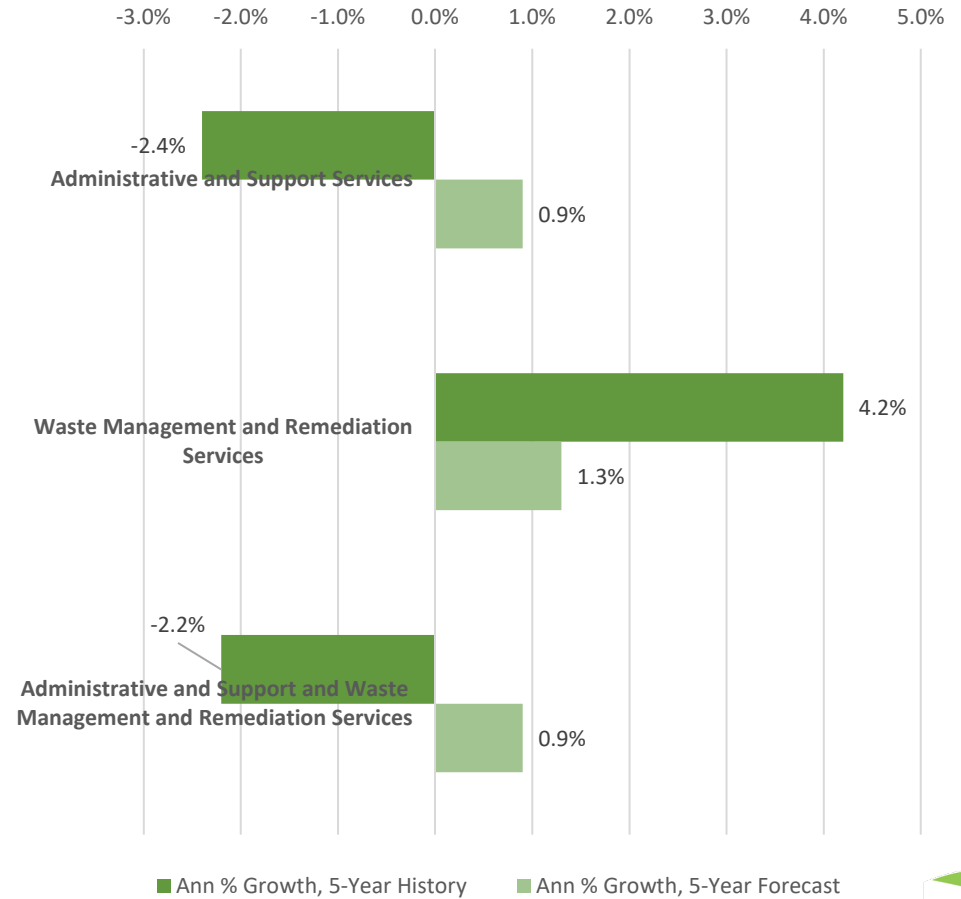
## Current Average Annual Wages

Source: Chmura JobsEQ, 2023Q2



## Growth Rates, Administrative, Support, and Waste Management

Source: Chmura JobsEQ, 2023Q2



## Occupation Distribution for Administrative and Support & Waste Management and Remediation Services 5-Year Forecast, 10-County Upstate Region

*Source: Chmura JobsEQ, 2023Q2*

Occupation	Current Avg Ann Wages	Total Demand for New/Replacement Talent, 5-Year Forecast
Laborers and Freight, Stock, and Material Movers, Hand	\$33,900	4,632
Janitors and Cleaners, Except Maids and Housekeeping Cleaners	\$29,700	3,544
Customer Service Representatives	\$34,700	2,513
Landscaping and Groundskeeping Workers	\$35,400	2,179
Security Guards	\$31,400	1,783
Team Assemblers	\$33,600	864
Packers and Packagers, Hand	\$30,900	839
Maids and Housekeeping Cleaners	\$27,200	825
Office Clerks, General	\$33,800	773
Human Resources Specialists	\$58,600	539



Upstate Job Postings,  
Educational Awards, and  
Skills Demand

## Cert/Assoc Educ Awards, Top 15

Source: Chmura JobsEQ, 2023Q3

Title	Certificates and 2yr Awards
Liberal Arts and Sciences/Liberal Studies	2.341
Welding Technology/Welder	857
Electromechanical Technologies/Technicians, Other	499
Registered Nursing/Registered Nurse	380
Cosmetology/Cosmetologist, General	263
Industrial Electronics Technology/Technician	246
Business Administration and Management, General	209
Business/Commerce, General	165
Emergency Medical Technology/Technician (EMT Paramedic)	160
Multi-/Interdisciplinary Studies, Other	159
Data Processing and Data Processing Technology/Technician	148
Administrative Assistant and Secretarial Science, General	138
Heating, Air Conditioning, Ventilation and Refrigeration Maintenance Technology/Technician	130
Machine Tool Technology/Machinist	113
Accounting	107

## 4-Year Educ Awards, Top 15

Source: Chmura JobsEQ, 2023Q3

Title	4yr Awards
Business Administration and Management, General	994
Registered Nursing/Registered Nurse	757
Psychology, General	664
Biology/Biological Sciences, General	608
Marketing/Marketing Management, General	350
Finance, General	324
Accounting	264
Mechanical Engineering	242
Political Science and Government, General	239
Elementary Education and Teaching	226
Computer and Information Sciences, General	212
Industrial Engineering	201
History, General	191
Exercise Science and Kinesiology	171
English Language and Literature, General	165

## Postgrad Educ Awards, Top 15

Source: Chmura JobsEQ, 2023Q3

Title	Postgraduate Awards
Business Administration and Management, General	357
Teacher Education and Professional Development, Specific Levels and Methods, Other	242
Education, General	218
Counselor Education/School Counseling and Guidance Services	127
Chiropractic	121
Engineering, Other	118
Biology/Biological Sciences, General	87
Accounting	87
Organizational Leadership	83
Educational Leadership and Administration, General	77
Educational/Instructional Technology	72
Mechanical Engineering	62
Human Resources Development	62
Physician Associate/Assistant	62
Bioengineering and Biomedical Engineering	59
Divinity/Ministry	55

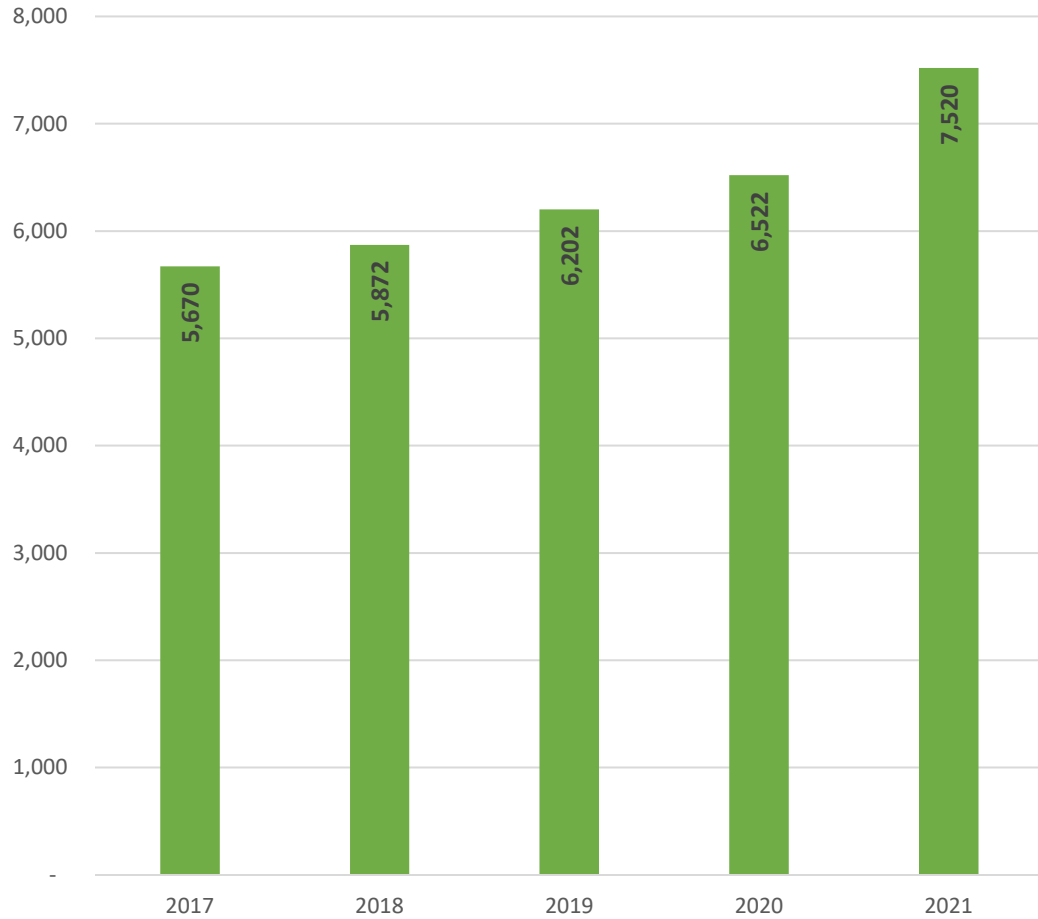


# Upstate Technical College Awards

## Total Awards

Four Technical Colleges in TATT Counties

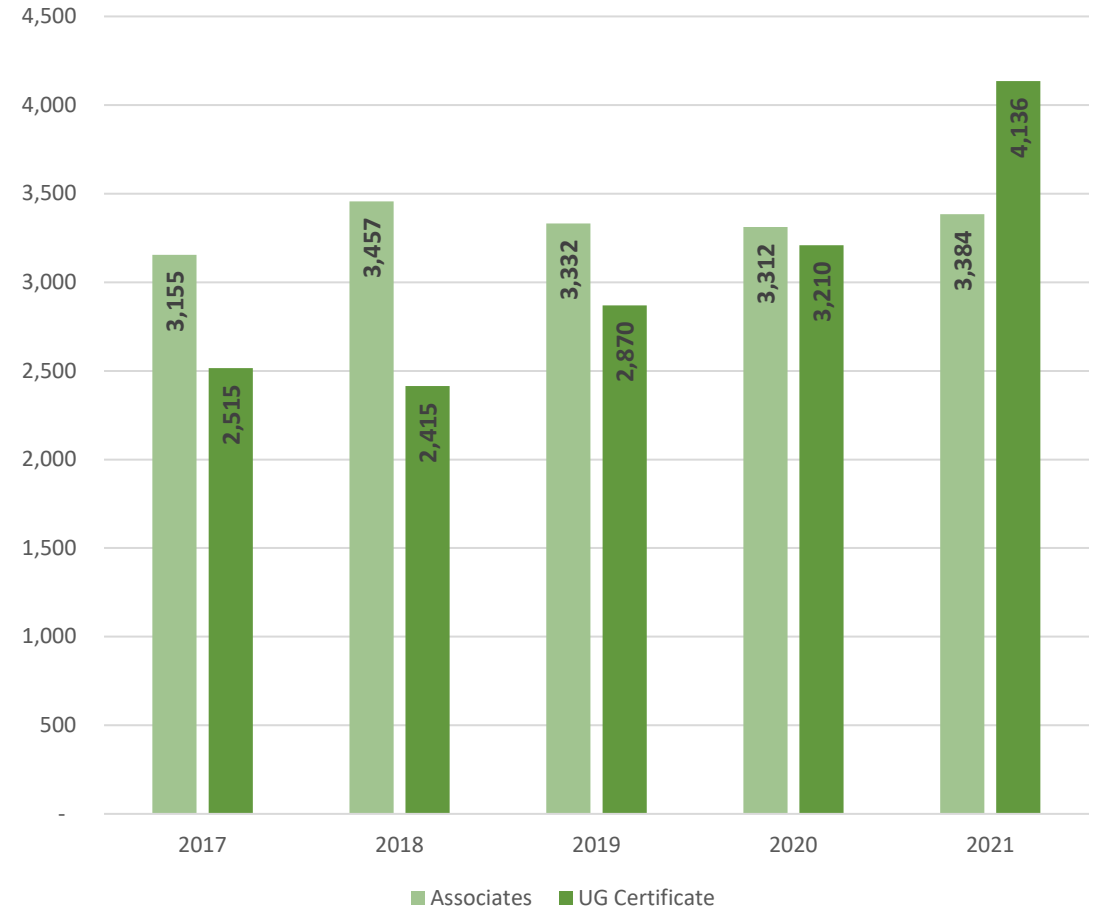
Source: IPEDS Data from Gray Associate Portal



## Distribution of UG Certificates and Associates Degrees

Four Technical Colleges in TATT Counties

Source: IPEDS Data from Gray Associates Portal





**Associates Online Job Posting,  
1/31/2023 to 1/31/2024** *Source: Chmura JobsEQ*

Occupation	Active Job Ads
Registered Nurses	396
Maintenance and Repair Workers, General	254
Computer User Support Specialists	237
Medical and Health Services Managers	154
First-Line Supervisors of Production and Operating Workers	139
Social and Human Service Assistants	115
Secretaries and Administrative Assistants, Except Legal, Medical, and Executive	114
Radiologic Technologists and Technicians	87
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	85
Network and Computer Systems Administrators	83
Business Operations Specialists, All Other	78
Bookkeeping, Accounting, and Auditing Clerks	77
First-Line Supervisors of Office and Administrative Support Workers	76
Medical and Clinical Laboratory Technicians	75
Customer Service Representatives	75

**Bachelors Online Job Posting,  
1/31/2023 to 1/31/2024** *Source: Chmura JobsEQ*

Occupation	Active Job Ads
Architectural and Engineering Managers	918
Computer and Information Systems Managers	760
Medical and Health Services Managers	551
Accountants and Auditors	542
Sales Representatives of Services, Except Advertising, Insurance, Financial Services, and Travel	525
Industrial Engineers	491
Registered Nurses	435
Social and Human Service Assistants	403
Electrical Engineers	378
Management Analysts	346
Financial Managers	329
Mechanical Engineers	316
Business Operations Specialists, All Other	303
Computer User Support Specialists	300
Human Resources Specialists	287

**Postgraduate Online Job Posting,  
1/31/2023 to 1/31/2024** *Source: Chmura JobsEQ*

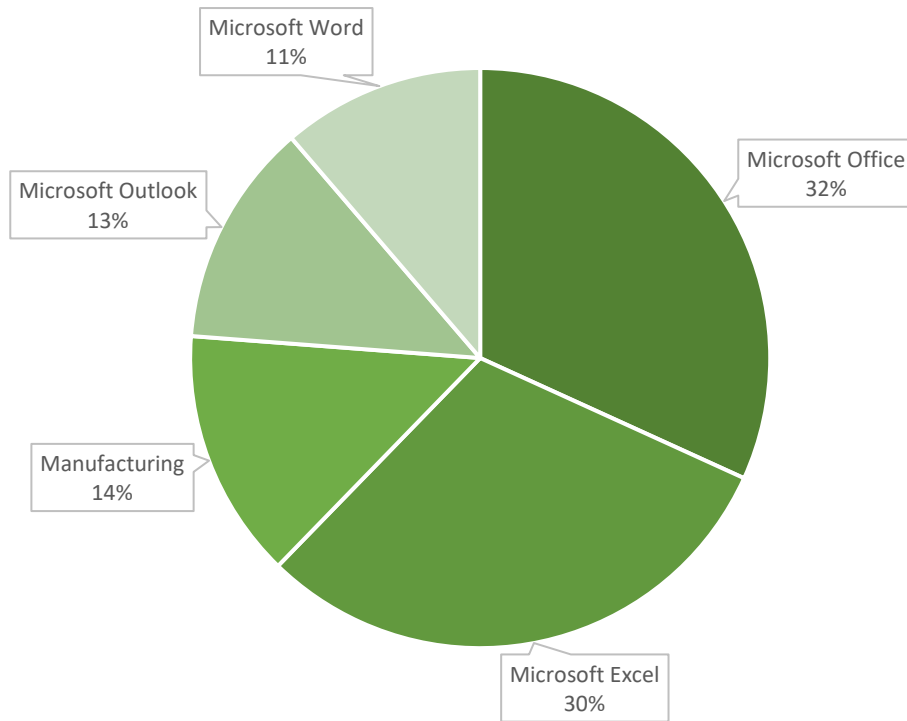
Occupation	Active Job Ads
Speech-Language Pathologists	680
Mental Health Counselors	340
School Psychologists	250
Nurse Practitioners	181
Mental Health and Substance Abuse Social Workers	116
Business Teachers, Postsecondary	115
Education Administrators, Postsecondary	99
Medical and Health Services Managers	99
Healthcare Social Workers	93
Education Administrators, Kindergarten through Secondary	55
Medical Scientists, Except Epidemiologists	55
Art, Drama, and Music Teachers, Postsecondary	50
Social and Human Service Assistants	47
Veterinarians	46
Educational, Guidance, and Career Counselors and Advisors	44



## Most Demanded Skills Identified in Associate Level Job Ads January 31, 2023 – January 31, 2024, Upstate, SC

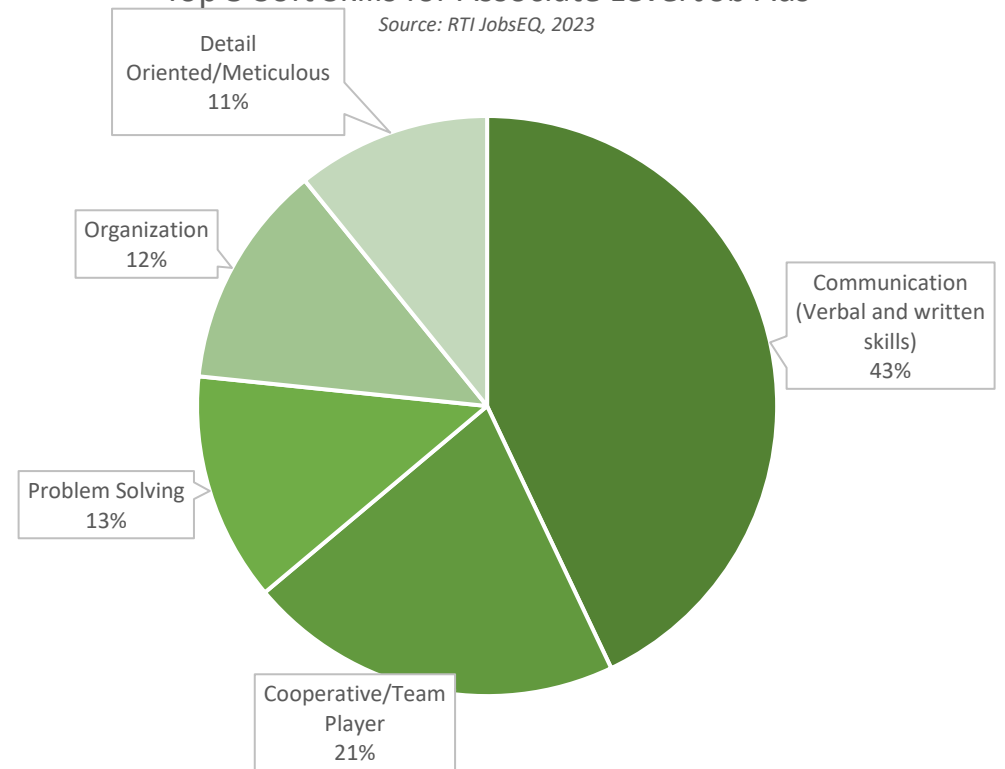
### Top 5 Hard Skills for Associate Level Job Ads

Source: RTI JobsEq, 2023



### Top 5 Soft Skills for Associate Level Job Ads

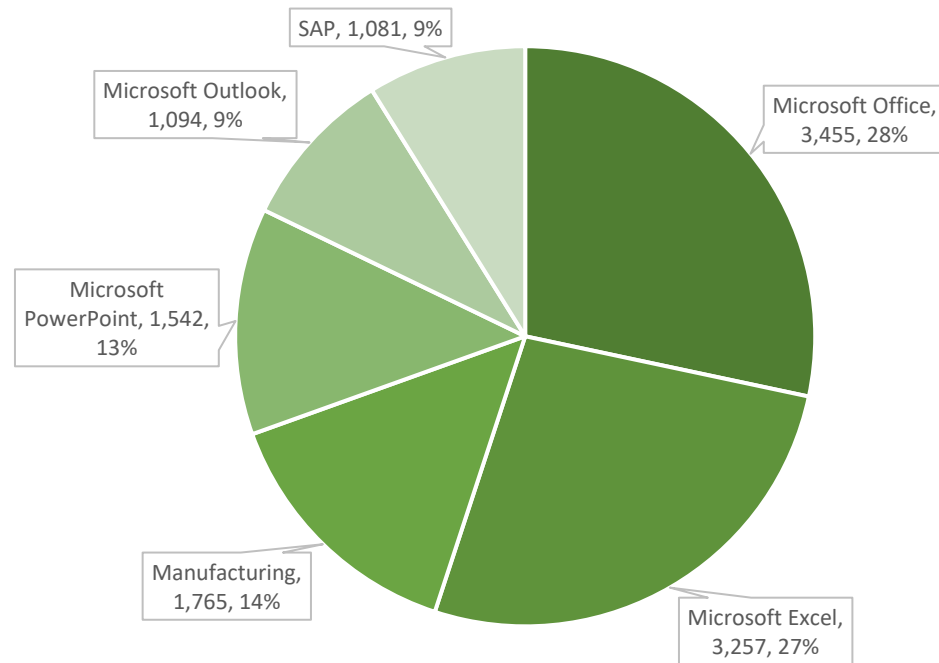
Source: RTI JobsEq, 2023



# Most Demanded Skills Identified in Bachelor Level Job Ads January 31, 2023 – January 31, 2024, Upstate, SC

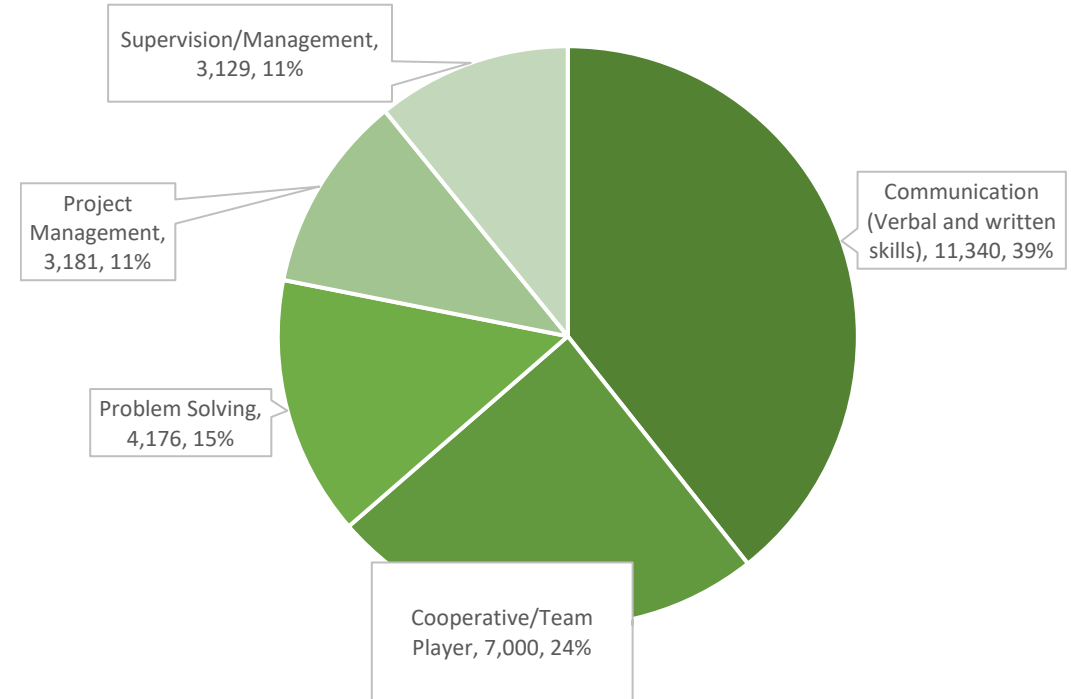
## Top 5 Hard Skills for Bachelor Level Job Ads

Source: RTI JobsEQ, 2023



## Top 5 Soft Skills for Bachelor's Level Job Ads

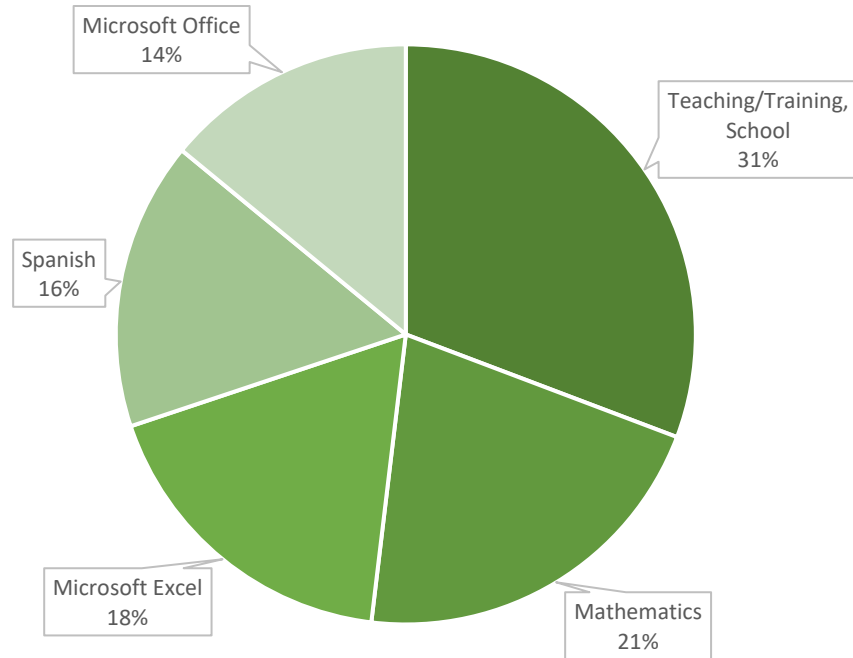
Source: RTI JobsEQ, 2023



# Most Demanded Skills Identified in Graduate Level Job Ads January 31, 2023 – January 31, 2024, Upstate, SC

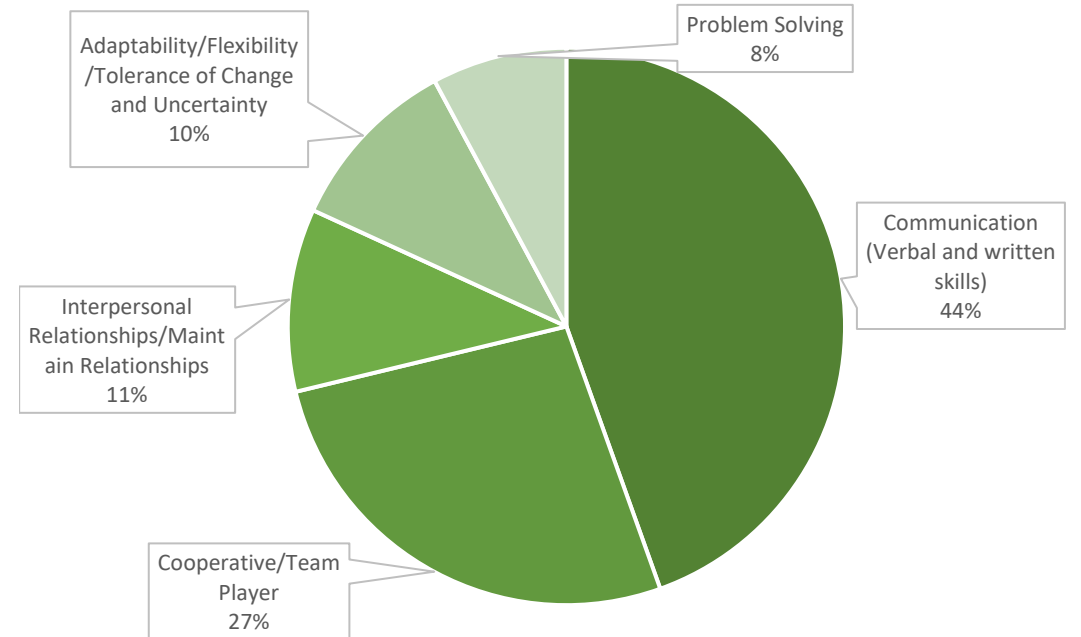
## Top 5 Hard Skills for Postgraduate Level Job Ads

Source: RTI JobsEq, 2023



## Top 5 Soft Skills for Graduate Level Jobs Ads

Source: RTI JobsEq, 2023



# Job Postings that Include the Phrase "Artificial Intelligence" 10-County Region, February 2023 – February 2024

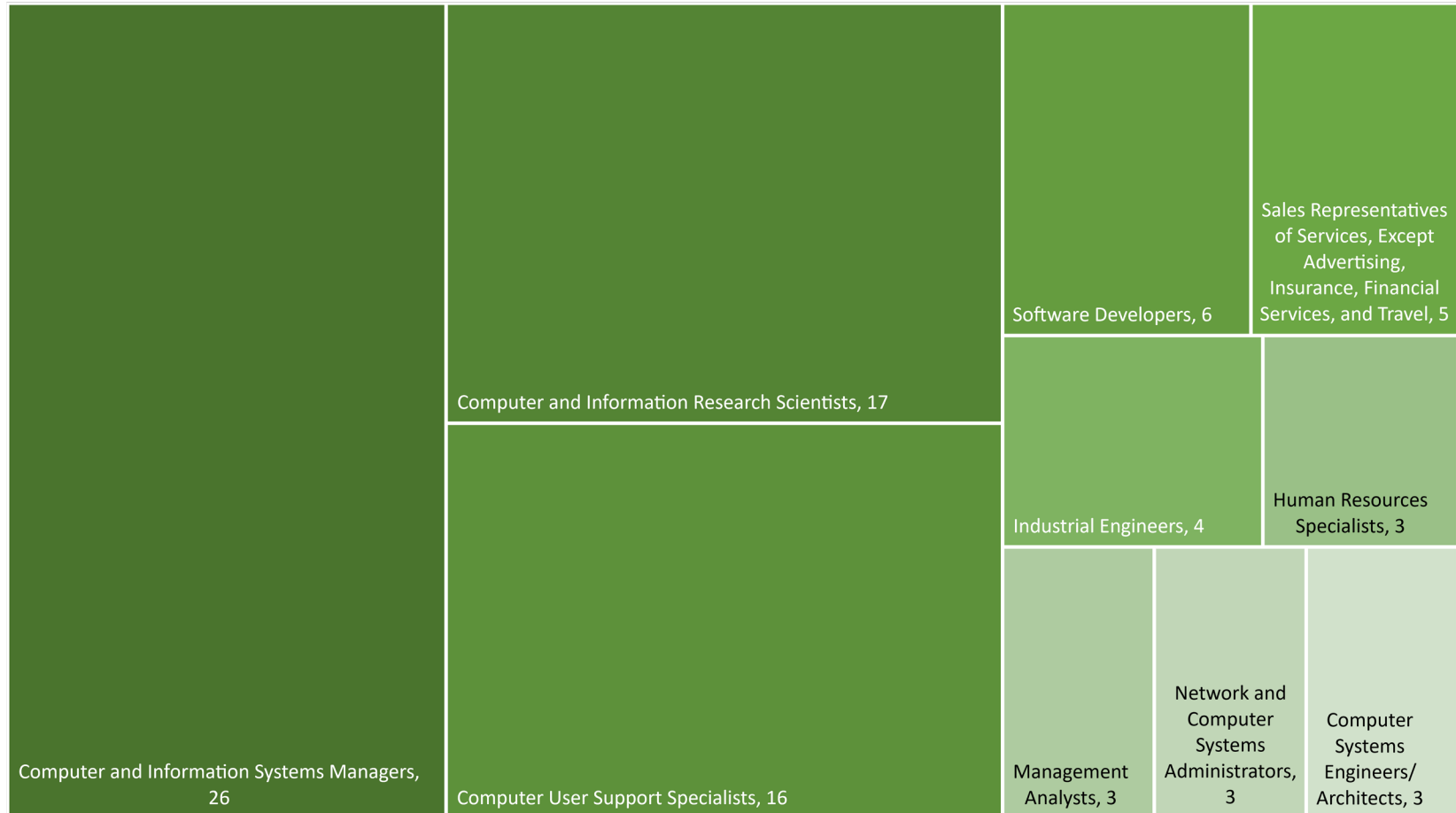
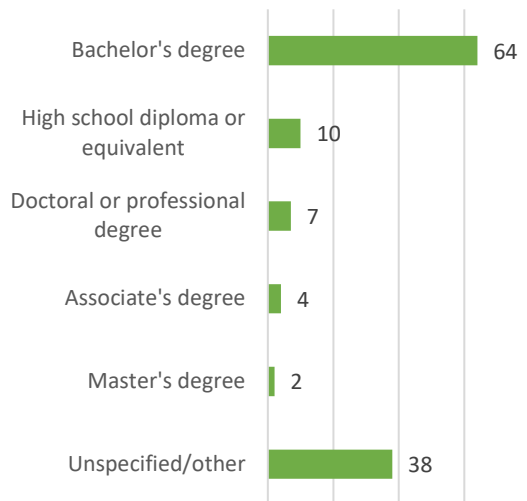
## Top 10 Occupations that Listed "Artificial Intelligence" in Job Posting, February 2023 - February 2024

Source: RTI JobsEQ

**125**  
Upstate

### Active Job Ads by Educational Level

Source: RTI JobsEQ



## Employers with most AI Job Postings

Source: RTI JobsEQ

Employer Name	Active Job Ads
Robert Half	11
Deloitte	7
Clemson University	6
Capgemini	5
Humana	5
PwC	5
BMW Manufacturing Co.	4
Michelin	4
Varsity Tutors	4
FUJIFILM	3
HKA Enterprises	3
KPMG	3
Stefanini	3
BMW Divisions are listed at least 3 additional times	5
Fujifilm Holdings is listed in addition to FUJIFILM	2

## Most Frequently Listed Hard Skills

Source: RTI JobsEQ

Skill Name	Active Job Ads
Machine Learning	36
Python	35
Structured Query Language (SQL)	30
Statistics	23
Microsoft Azure	20
Amazon Web Services (AWS)	18
Agile	16
Data Science	16
Tableau	16
Computer Programming/Coding	15
SAP	15
Microsoft Excel	13
Mathematics	11
Data Analysis	10
Microsoft Office	10

## Most Frequently Listed Soft Skills

Source: RTI JobsEQ

Skill Name	Active Job Ads
Communication (Verbal and written skills)	78
Cooperative/Team Player	64
Problem Solving	41
Analytical	28
Interpersonal Relationships/Maintain Relationships	20
Project Management	20
Organization	19
Customer Service	17
Supervision/Management	16
Leadership	15
Decision Making/Decisiveness	14
Self-Motivated/Ability to Work Independently/Self Leadership	14
Prioritize	13
Ability to Work in a Fast Paced Environment	12
Initiative	10

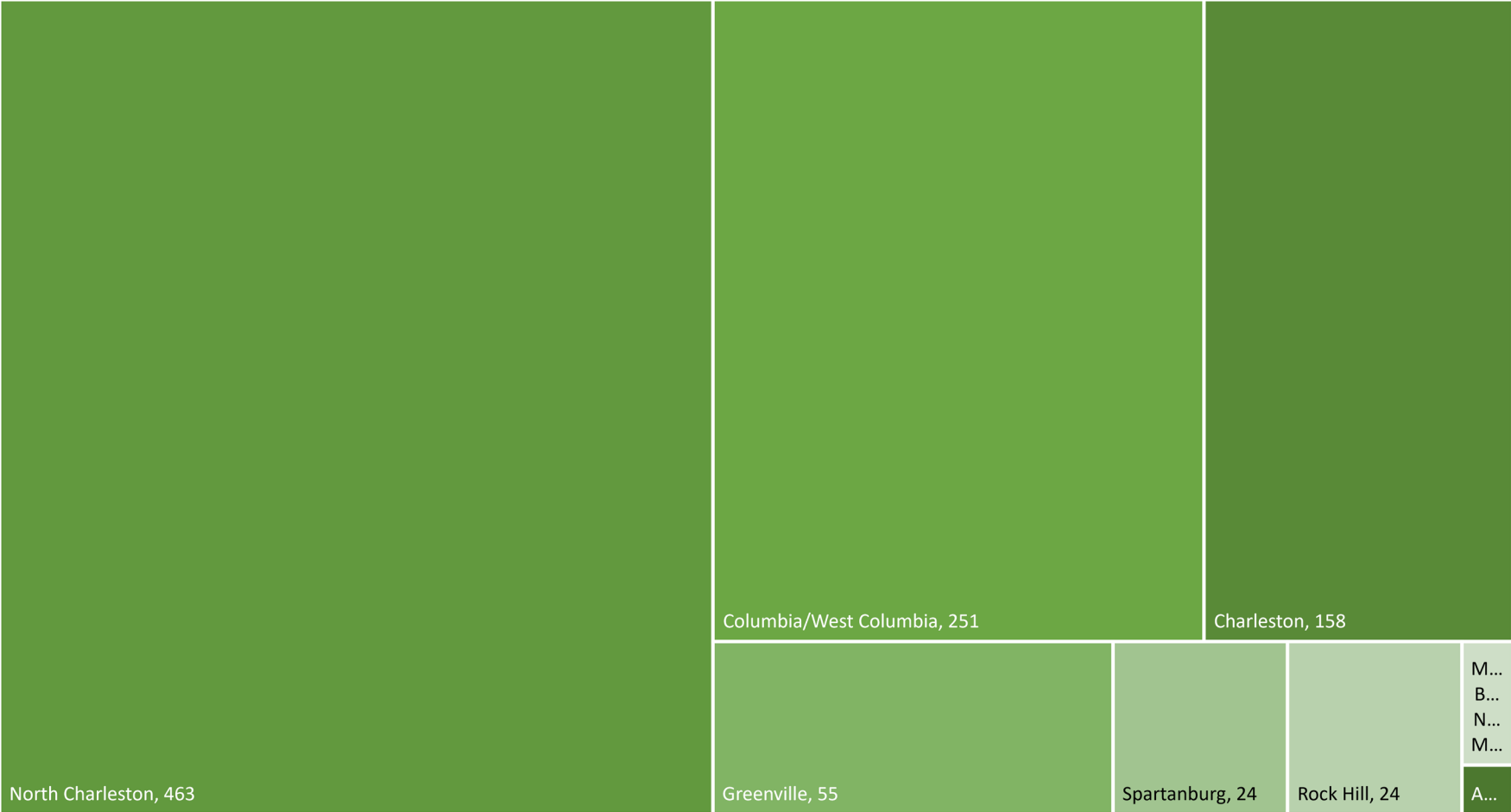


# Where are the AI Job Postings in South Carolina?

1,282  
South Carolina

AI Job Postings by Major SC Population Hubs  
February 2023 - February 2024

Source: RTI JobsEQ

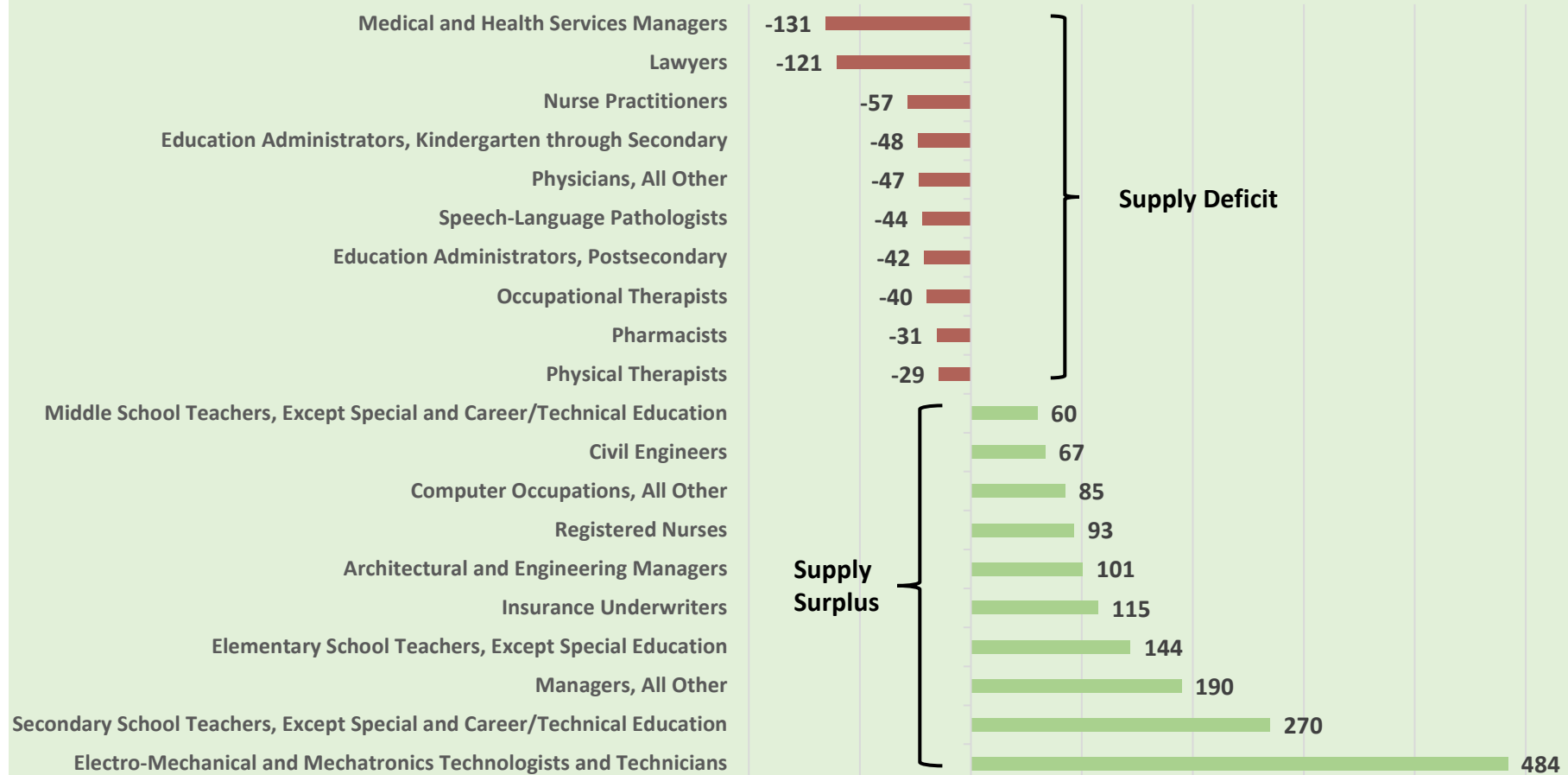


Note: 612 of 1,282 AI Job Postings in SC were with one employer, Science Applications International Corporation (SAIC). SAIC has operations in the Charleston region.



## Award Gaps, 10-County Region, Two-Year Degree or Higher Only

Source: Chmura JobsEQ, 2023Q3





# Questions and Discussions

# Additional Slides



# Wage Distribution for Top 5 Occupational Categories, Ranked on Median Wage

Source: Chmura JobsEQ, 2023Q3



◇ Mean  
 □ Entry Level  
 △ Experienced  
 × 10%  
 × 25%  
 ○ 50% (Median)  
 + 75%  
 - 90%



# Industry Clusters For 10 County Upstate Region, 2023Q3

