



Occupation Report

Cyber Security

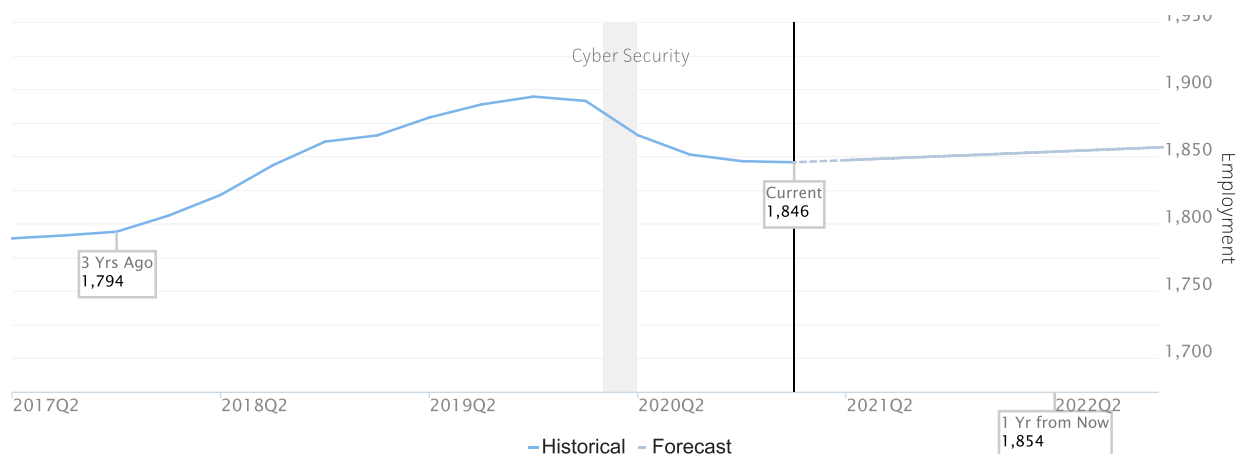
Florence, SC MSA



Occupation Snapshot	3
Employment by Industry	4
Wages	5
Occupation Demographics	6
Education Profile	7
Postsecondary Programs Linked to Cyber Security	8
RTI (Job Postings)	9
Top Skill and Certification Gaps	13
Occupation Gaps	14
Geographic Distribution	15
Florence, SC MSA Regional Map	17
Region Definition	18
Data Notes	19
FAQ	19

Occupation Snapshot

6-Digit Occupation	Empl	Avg Mean Wages	LQ	3-Year Empl Change	Annual Demand	Forecast Ann Growth
Computer User Support Specialists	292	\$42,500	0.76	8	24	0.1%
Software Developers and Software Quality Assurance Analysts and Testers	260	\$78,900	0.29	28	24	1.6%
Computer Systems Analysts	249	\$80,700	0.70	7	18	0.0%
Network and Computer Systems Administrators	181	\$69,200	0.89	-7	12	-0.2%
Facilities Managers	149	\$107,100	0.91	2	13	0.2%
Project Management Specialists and Business Operations Specialists, All Other	145	\$65,700	0.17	9	14	0.2%
Computer and Information Systems Managers	126	\$129,200	0.45	6	11	0.5%
Computer Occupations, All Other	68	\$80,200	0.29	0	5	0.0%
Computer Programmers	61	\$67,800	0.56	-23	3	-1.5%
Computer Network Support Specialists	55	\$62,800	0.50	0	5	0.1%
Remaining Component Occupations	259	\$72,300	0.60	9	22	0.5%
Cyber Security	1,846	\$75,400	0.45	40	150	0.3%



- 💡 “Annual Demand” is the projected need for new entrants into an occupation. New entrants are needed due to expected growth and to replace workers who left the occupation due to factors such as retirement or switching careers.
- 💡 “Forecast Ann Growth” is the expected change in jobs due to national, long-term trend projections (per the BLS) as well as local factors such as industry mix and population growth (as computed and modeled by Chmura).

Employment by Industry

Industry Title	% of Occ Empl	Empl	10-Year Separations	10-Year Empl Growth	10-Year Total Demand
Software Publishers	10.1%	186	151	36	187
Management of Companies and Enterprises	9.1%	168	131	8	138
Computer Systems Design and Related Services	6.6%	123	100	25	125
General Medical and Surgical Hospitals	5.2%	97	74	-1	73
Employment Services	4.9%	90	69	0	69
Agencies, Brokerages, and Other Insurance Related Activities	4.7%	86	67	5	72
Administration of Human Resource Programs	4.0%	74	55	-3	52
Executive, Legislative, and Other General Government Support	3.7%	68	52	1	53
Elementary and Secondary Schools	3.6%	67	51	-5	46
Scientific Research and Development Services	3.1%	57	44	2	46
Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	2.5%	47	35	1	36
Depository Credit Intermediation	2.5%	46	35	1	36
Colleges, Universities, and Professional Schools	2.3%	42	33	0	33
Administration of Economic Program	2.1%	39	29	-2	27
Electric Power Generation, Transmission and Distribution	1.7%	31	21	-6	15
Accounting, Tax Preparation, Bookkeeping, and Payroll Services	1.6%	30	24	1	25
Wired and Wireless Telecommunications Carriers	1.5%	28	19	-6	13
Religious Organizations	1.3%	24	19	1	20
Nondepository Credit Intermediation	1.2%	21	17	3	21
Offices of Physicians	1.1%	20	16	1	17
All Others	27.2%	502	399	3	402

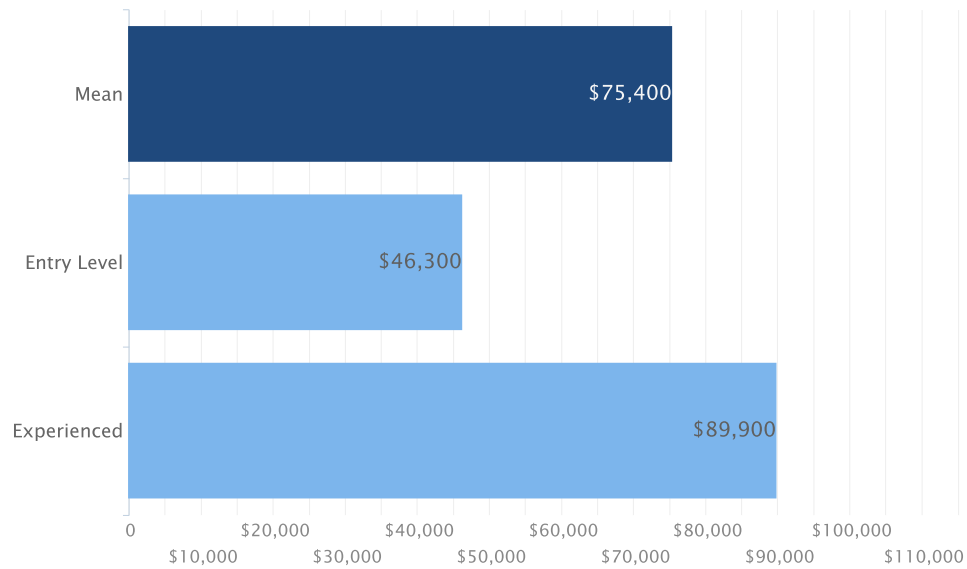


The industry distribution indicates the industries in which workers in the occupation(s) are primarily found.



“10-Year Empl Growth” may show industries with positive as well as negative growth; this would indicate that the occupation(s) being examined are expected to expand within some industries while contracting in others.

Wages

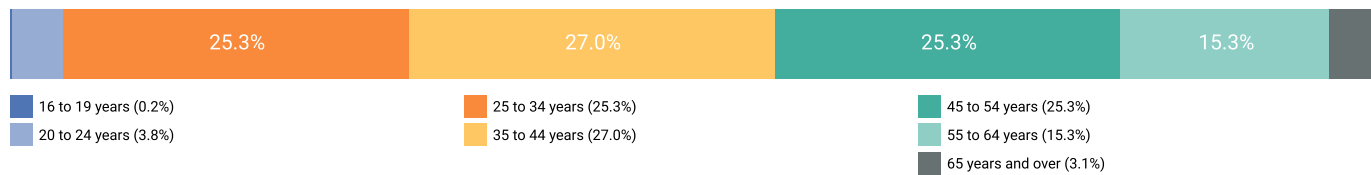


Occupation	Mean	Median	Entry Level	Experienced
Cyber Security	\$75,400	\$71,700	\$46,300	\$89,900

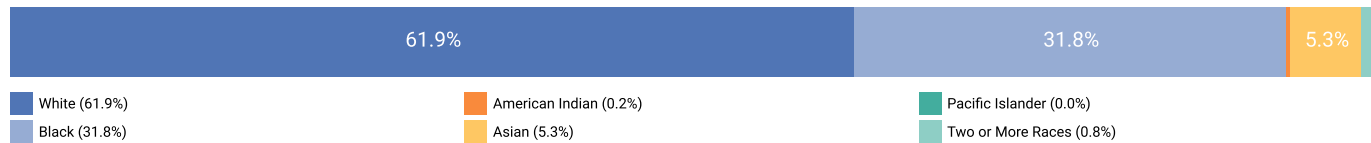
- 💡 Occupation wages here are based on data from the Bureau of Labor Statistics, OES program, and imputed by Chmura where necessary.
- 💡 When this report is run for an occupation group, the table above displays up to the top ten detailed occupations which have the highest average wages within the occupation group.

Occupation Demographics

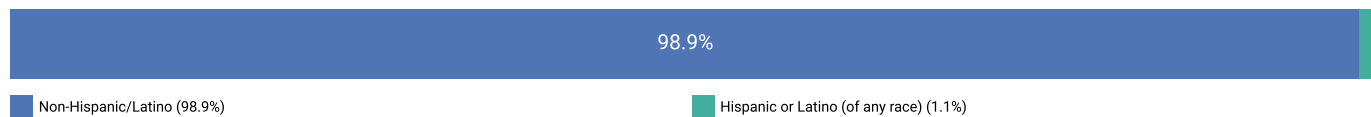
Age



Race



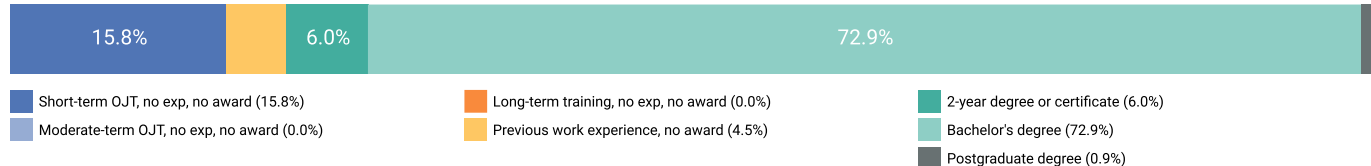
Ethnicity



Gender

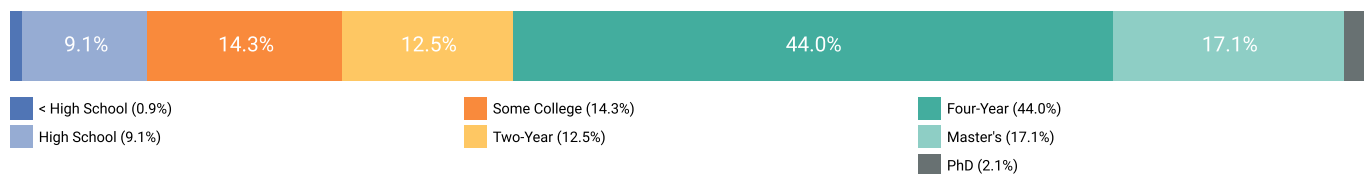


Education and Training Requirements



Education Profile

Educational Attainment



Occupation	Typical Entry-Level Education	Previous Work Experience	Typical On-the-Job Training
Computer User Support Specialists	Some college, no degree	None	None
Software Developers and Software Quality Assurance Analysts and Testers	Bachelor's degree	None	None
Computer Systems Analysts	Bachelor's degree	None	None
Network and Computer Systems Administrators	Bachelor's degree	None	None
Facilities Managers	Bachelor's degree	Less than 5 years	None
Project Management Specialists and Business Operations Specialists, All Other	Bachelor's degree	None	None
Computer and Information Systems Managers	Bachelor's degree	5 years or more	None
Computer Occupations, All Other	Bachelor's degree	None	None
Computer Programmers	Bachelor's degree	None	None
Web Developers and Digital Interface Designers	Associate's degree	None	None

 The stacked bar chart here illustrates the estimated mix of educational attainment of the workers in this occupation(s) in aggregate.

 The table indicates typical education and training requirements rather than the mix of attainment of workers in such positions.

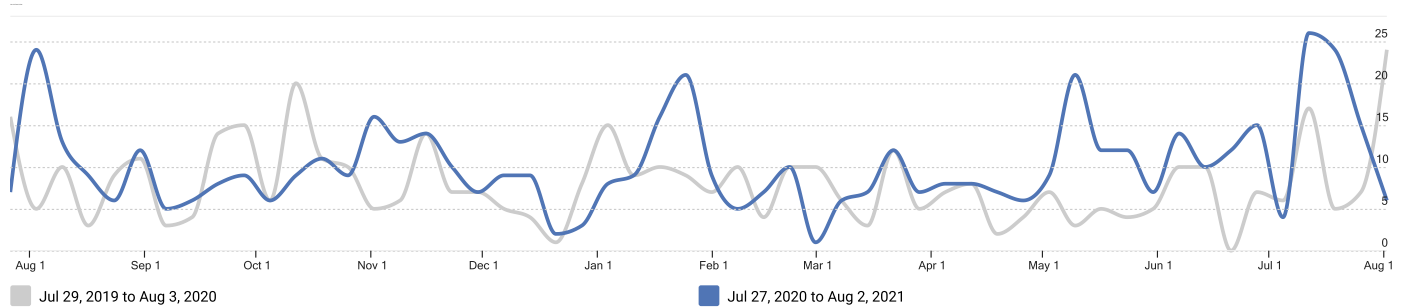
Postsecondary Programs Linked to Cyber Security

Program	Awards
Coker University	
Business Administration and Management, General	33
Business/Commerce, General	31
Computer Science	3
Criminology	19
Florence-Darlington Technical College	
Business Administration and Management, General	44
Criminal Justice/Safety Studies	11
Data Processing and Data Processing Technology/Technician	4
Francis Marion University	
Business Administration and Management, General	49
Computer and Information Sciences, General	10
Management Information Systems, General	11

 The number of graduates from postsecondary programs in the region identifies the pipeline of future workers as well as the training capacity to support industry demand.

 Among postsecondary programs at schools located in the Florence, SC MSA, the sampling above identifies those most linked to Remote Jobs. For a complete list see JobsEQ®, <http://www.chmuraecon.com/jobseq>

RTI (Job Postings)



💡 Online job ads are a timely indicator of local demand. Occupation assignments shown below are made by Chmura based upon analysis of job titles and job descriptions. Top employers and listed job requirements are shown on the following pages.

Occupations

SOC	Occupation	Total Ads	
15- 1232.00	Computer User Support Specialists	227	<div></div>
15- 1252.00	Software Developers	79	<div></div>
13- 1199.00	Business Operations Specialists, All Other	61	<div></div>
15- 1244.00	Network and Computer Systems Administrators	55	<div></div>
15- 1253.00	Software Quality Assurance Analysts and Testers	24	<div></div>
15- 1212.00	Information Security Analysts	15	<div></div>
11- 3021.00	Computer and Information Systems Managers	14	<div></div>
15- 1299.08	Computer Systems Engineers/Architects	14	<div></div>
15- 1211.00	Computer Systems Analysts	11	<div></div>
15- 1211.01	Health Informatics Specialists	11	<div></div>

Locations

Location	Total Ads	
Florence, South Carolina	214	
Florence, SC 29501	126	
Hartsville, South Carolina	35	
Florence, SC, 29501	23	
Florence, SC 29506	15	
Florence, South Carolina 29501	13	
Florence, South Carolina 29506	10	
Florence, SC 29503	6	
Florence, SC, 29506, US	6	
Darlington, SC 29532	5	

Employers

Employer Name	Total Ads	
Jobot	69	
McLeod Health	68	
BlueCross BlueShield of South Carolina	54	
Sonoco	17	
Sonoco Products Company	14	
ABB	12	
Thermo Fisher Scientific	12	
Dell	10	
Olsten	10	
Assurant	8	

Hard Skills

Skill Name	Total Ads	
Microsoft Office	83	<div></div>
Microsoft Excel	81	<div></div>
Computer Programming/Coding	62	<div></div>
Personal Computers (PC)	58	<div></div>
Structured Query Language (SQL)	51	<div></div>
Amazon Web Services (AWS)	46	<div></div>
Word Processing	39	<div></div>
Computer Networking	32	<div></div>
Microsoft Azure	32	<div></div>
JavaScript	27	<div></div>

Job Titles

Job Title	Total Ads	
Contract Specialist	9	<div></div>
EDI Operations II - PGBA	9	<div></div>
Field Service Rep	7	<div></div>
Technical Information Specialist - PGBA	7	<div></div>
Field Service Technician	6	<div></div>
IT Support Specialist	6	<div></div>
Continuous Improvement Manager	5	<div></div>
Data Administrator	5	<div></div>
Document Control Clerk	5	<div></div>
QA Analyst - PGBA	4	<div></div>

Education Levels

Minimum Education Level	Total Ads	
Bachelor's degree	146	
High school diploma or equivalent	118	
Associate's degree	71	
Master's degree	1	
Doctoral or professional degree	1	
Unspecified/other	220	

Programs

Program Name	Total Ads	
Computer Science	75	
Business	31	
Engineering	24	
Information Technology	23	
Business Administration	18	
Technical	10	
Life Science	9	
Linguistics	8	
Management Information Systems	8	
Computer Engineering	7	

Top Skill and Certification Gaps

Top 10 Skill Gaps in Florence, SC MSA

Name	Candidates	Openings	Gap
Amazon Web Services (AWS)	5	10	-5
Structured Query Language (SQL)	17	21	-5
Personal Computers (PC)	5	10	-5
Microsoft Excel	14	18	-4
Microsoft Access	1	5	-3
Microsoft Office	17	20	-3
SaaS	1	4	-3
VMWare	3	6	-3
Information Technology Infrastructure Library (ITIL)	2	4	-3
Manufacturing	3	5	-3

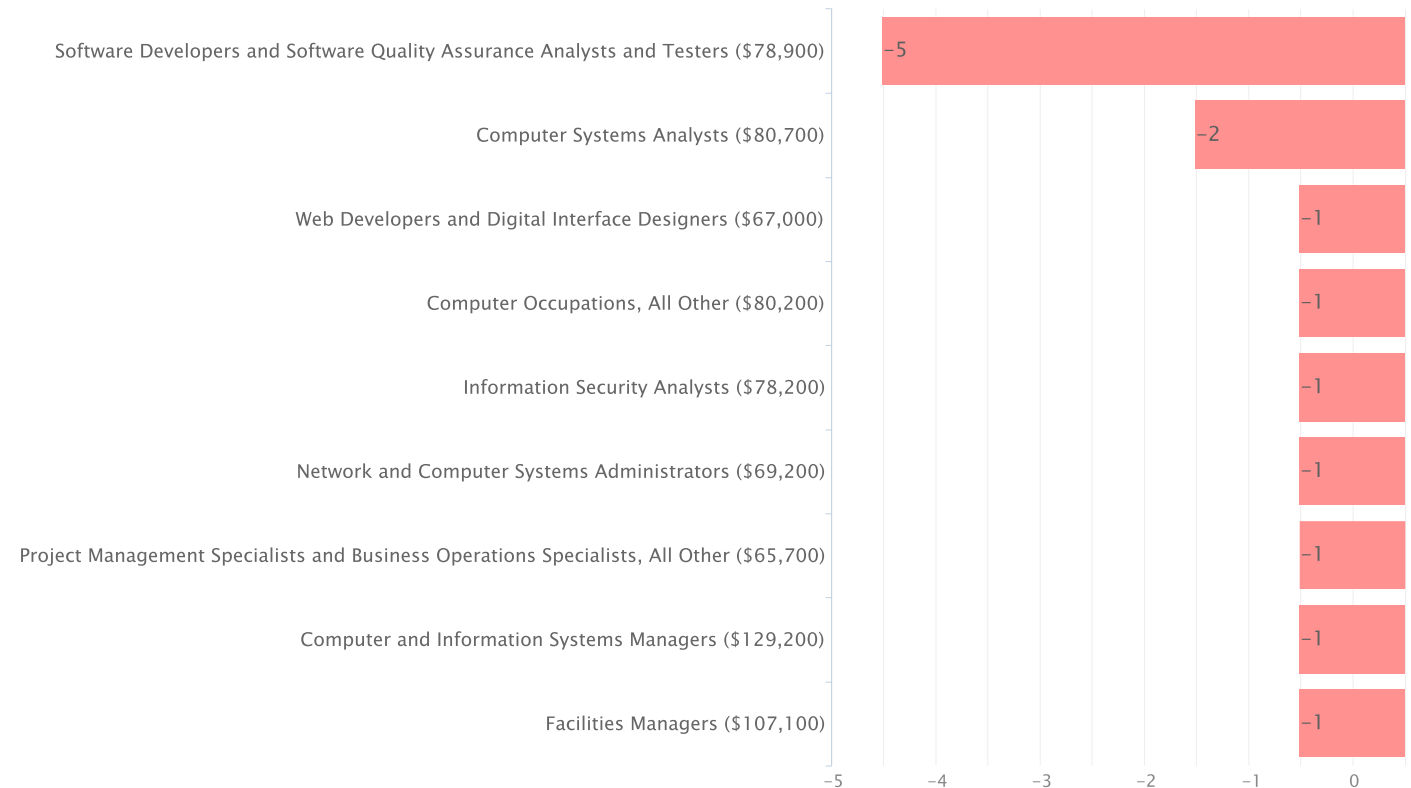
Top 10 Certification Gaps in Florence, SC MSA



Name	Candidates	Openings	Gap
CompTIA A+ Certification (A+ Certification)	0	1	-1
Microsoft Certified Solutions Expert (MCSE)	0	1	-1
Six Sigma Black Belt Certification (SSBB)	0	1	-1
Certified Scrum Coach (CSC)	0	1	-1
Cisco Certified Network Professional (CCNP)	0	1	0
Project Management Professional (PMP)	1	2	0
Certified Information Systems Auditor (CISA)	0	1	0
Certification in Cardiopulmonary Resuscitation (CPR)	1	1	0
Certified Healthcare Facility Manager (CHFM)	1	1	0
Certified Information Security Manager (CISM)	1	1	0



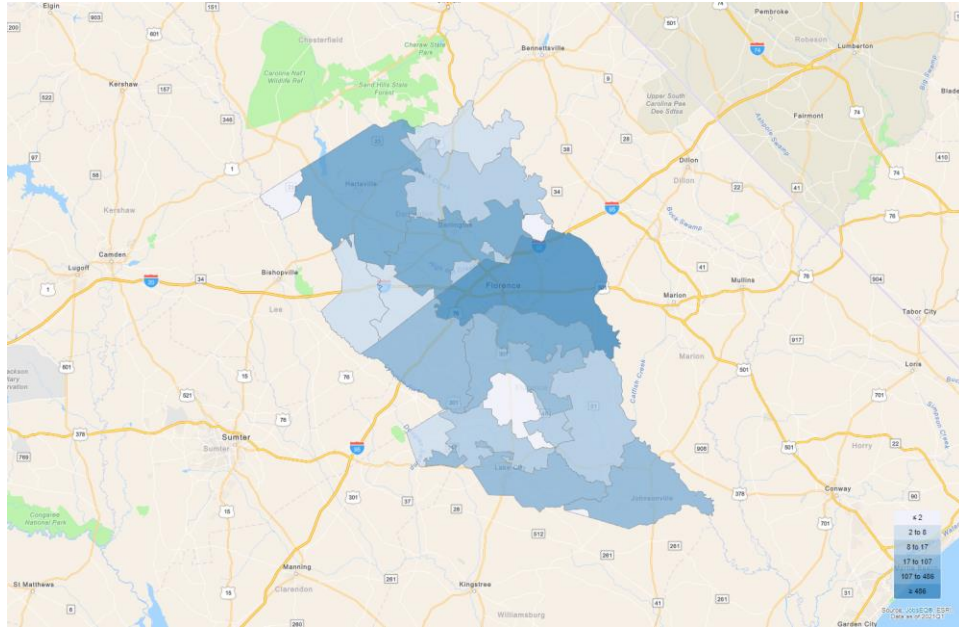
Skill and certifications gaps can help inform employee development programs, as well as provide a comparison of the needs of regional employers to the supply.

Occupation Gaps



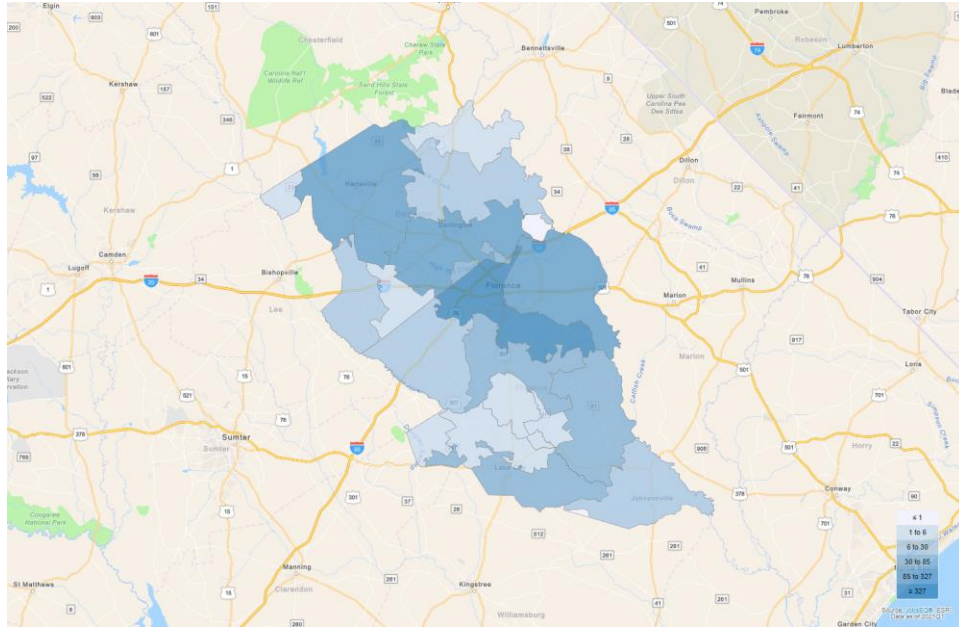
-  The above are the potential average annual gaps over 10 years. Many variables go into this analysis, but at its core it is based on a forecast comparing occupation demand growth to the local population growth and the projected educational attainment of those residents. When an area, for example, has an occupation expected to grow quickly but the educational requirement for the occupation does not match well with the educational attainment of its residents, there is a high potential for an occupation shortfall in the region. Alternatively, slow-growing or contracting occupations often represent potential supply surpluses.
-  The potential supply shortfall is an underlying force that the market needs to resolve one way or another, such as by employers recruiting from further distances for these occupations, wages going up to attract more candidates, and/or increased demand and wages enticing more local residents to get training for these occupations. While this an important analysis for determining local occupation needs, the occupation gap should be considered along with other regional data including growth and separation forecasts, unemployment rates, wage trends, and award and skill gap analyses.

Geographic Distribution



Top ZCTAs by Place of Work for Cyber Security, 2021Q1

Region	Employment
ZCTA 29501 (Florence County, SC portion)	692
ZCTA 29506 (Florence County, SC portion)	487
ZCTA 29550 (Darlington County, SC portion)	163
ZCTA 29505	120
ZCTA 29532 (Darlington County, SC portion)	107
ZCTA 29560 (Florence County, SC portion)	69
ZCTA 29541	61
ZCTA 29161 (Florence County, SC portion)	56
ZCTA 29555 (Florence County, SC portion)	17
ZCTA 29540	15

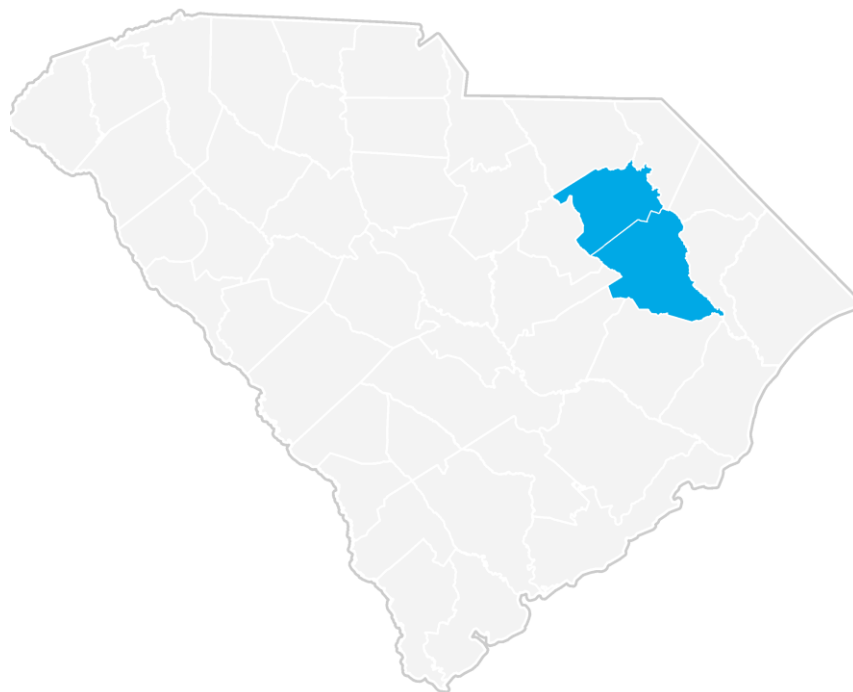


Top ZCTAs by Place of Residence for Cyber Security, 2021Q1

Region	Employment
ZCTA 29501 (Florence County, SC portion)	769
ZCTA 29505	328
ZCTA 29550 (Darlington County, SC portion)	209
ZCTA 29506 (Florence County, SC portion)	113
ZCTA 29532 (Darlington County, SC portion)	86
ZCTA 29560 (Florence County, SC portion)	64
ZCTA 29501 (Darlington County, SC portion)	53
ZCTA 29541	39
ZCTA 29583	31
ZCTA 29555 (Florence County, SC portion)	23

💡 “Place of work” employment is based upon the location of employers for these workers. “Place of residence” data refers to the home locations of the workforce, which is typically the preferred data set to use when calculating labor availability within a drive-time or radius of a potential worksite.

Florence, SC MSA Regional Map



Region Definition

Florence, SC MSA is defined as the following counties:

Darlington County, South Carolina

Florence County, South Carolina

Data Notes

- Occupation employment by default indicates employment by place of work. Occupation employment is as of 2021Q1 and is based on industry employment and local staffing patterns calculated by Chmura and utilizing BLS OES data. Employment forecasts are modeled by Chmura and are consistent with BLS national-level 10-year forecasts. Occupation wages (mean, median, and percentiles) are derived from BLS OES data and are as of 2020 and represent the average for all Covered Employment. Entry-level and experienced wages are derived from these source data, computed by Chmura.
- Industry employment is as of 2021Q1 and is based upon BLS QCEW data, imputed by Chmura where necessary, and supplemented by additional sources including Census ZBP data.
- Education and training requirements are from the BLS. Educational attainment mix and other occupation demographics data are modeled by Chmura for 2021Q1 using regional occupation employment from JobsEQ, ZCTA-level demographics data from the Census Bureau, and national occupation-demographics patterns from the BLS.
- Postsecondary awards are per the NCES and are for the 2018-2019 academic year. Any programs shown are linked with the occupation(s) being analyzed via the program-occupation crosswalk, which may not be comprehensive. Any programs shown reflect only data reported to the NCES; reporting is required of all Title IV schools. Training providers that do not report data to the NCES are not reflected.
- Job ads data are online job posts from the Real-Time Intelligence (RTI) data set, produced wholly by Chmura and gleaned from over 40,000 websites. Data reflect ads active during the last twelve month period ending 08/12/2021 and advertised for any Zip Code Tabulation Area in or intersecting with the region for which this report was produced. Historical ad volume is revised as additional data are made available and processed. Since many extraneous factors can affect short-term volume of online job postings, time-series data can be volatile and should be used with caution. All ad counts represent deduplicated figures.
- For skill and certification gaps, openings and candidates are based upon regional occupation demand (growth plus separations) and the percent of skill demand and supply. Skill demand mix data are per a one-year sample of RTI data; skill supply data are estimated using a five-year sample of resumes data; both data sets compiled as of January 2021. Data may be based, at least in part, on data from broader geographies; see the Skill Gaps analytic export for more details.
- Occupation gaps are modeled by Chmura, indicating long-term potential supply and demand mismatches in a region due, in part, to job demand and labor pool dynamics, including educational attainment and projected growth.
- Occupation employment by place of residence is as of 2021Q1 and modeled by Chmura based upon occupation employment by place of work and commuting patterns. Commuting patterns are derived from source data from the Census Bureau, occupation-specific commuting tendencies, and updated to reflect more recent population and employment estimates.
- Figures may not sum due to rounding.

FAQ

What is (LQ) location quotient?

Location quotient is a measurement of concentration in comparison to the nation. An LQ of 1.00 indicates a region has the same concentration of an industry (or occupation) as the nation. An LQ of 2.00 would mean the region has twice the expected employment compared to the nation and an LQ of 0.50 would mean the region has half the expected employment in comparison to the nation.

What is annual demand?

Annual demand is a of the sum of the annual projected growth demand and separation demand. Separation demand is the number of jobs required due to separations—labor force exits (including retirements) and turnover resulting from workers moving from one occupation into another. Note that separation demand does not include all turnover—it does not include when workers stay in the same occupation but switch employers. Growth demand is the increase or decrease of jobs expected due to expansion or contraction of the overall number of jobs.