



# EDUCATORS AND POLICYMAKERS REPORT



PURPOSE



# Educators and Policymakers Report

## OVERVIEW

A widening gap between the skills employers need and the skills jobseekers have is a challenge in the global marketplace and, more specifically, for states and cities across the United States that want to strengthen and grow their local economy. Georgia is similarly situated and is taking pro-active steps to bolster its robust talent pipeline by better aligning its education and career readiness programs with market demand. To this end, the Metro Atlanta Chamber (MAC), in collaboration with Accenture, set out to clearly identify where talent gaps exist and develop recommendations to address these challenges.

At a glance, the research and data collection garnered over the past year reveals several defining statistics. Between 2010 and 2015, Georgia experienced exponential job growth resulting from aggressive efforts to attract U.S. and multinational companies, as well as effective public policy initiatives to foster existing industry expansion. Specifically, employer job postings grew by 154% in Georgia compared with a 142% growth rate nationally. At the same time, national rankings place Georgia 34th among states for unemployment. While Georgia employers are creating an increasing number of jobs, a significant number of workers continue to report that they are unemployed or underemployed. This is largely due to a mismatch of degrees and skills supplied versus what employers need.

## DETAILED REPORT FINDINGS

### MAC and Accenture identified two types of gaps:

- 1. Talent Gap:** This is illustrated by an undersupply in the number of degrees and certifications conferred in Georgia when compared with associated entry-level occupational demands for those graduates; and
- 2. Skills Gap:** This is defined as the shortfall of core professional and soft skills identified by employers as requirements for available positions when compared to the reported skills of the current talent pool.

Overall, the findings for Georgia and the core metro Atlanta area are very similar. Both Georgia and core metro Atlanta's highest in-demand occupations and technical skill sets are among business, healthcare, and technology. Demand gaps in business and technology are present across all industries. Soft skills, such as effective communication and problem-solving, were identified as primary skills gap areas—representing more than half of employer-requested baseline skills on job descriptions. Soft skills are self-reported by employers as one of the biggest barriers to hiring otherwise well-skilled potential employees.

By correlating occupational demand to specific degrees and certifications, we were able to identify measurable gaps for degree and certification clusters at different levels of education. Employer interviews verified the aggregate demand data that shows the need for core professional (hard skills) and soft skills.

## 1. Talent Gap: Entry-Level Demand vs. Students' Program of Study

When comparing employer demand for occupations to student demand for programs of study, the findings reveal that business and healthcare programs have consistently remained in the top two spots for students, as shown in Figure A. Meanwhile, a decline in student demand leaves computer science stalled in the #7 spot since 2008, down from the #4 position in 2003-2004. At the same time, employer demand for IT occupations is on the rise across the nation, accounting for 30% of all occupational job postings in Georgia between 2007 and 2015, as shown in Figure B.

Employer demand for skill types varies with levels of education. Therefore, degrees and certifications conferred at different education levels were compared with the entry-level demand. The ten most common degrees and certifications conferred at each education level were identified; those findings were linked to the most common occupations, defined as those with the greatest number of job postings; then entry-level demand for these occupations was compared with degrees and certifications conferred for the same time period.

When referring to the graphs on page 7 and 8, figures C, D, and E show supply and demand by award level (Technical Certificates and Credentials, Associate Degrees, and Bachelor's Degrees). While Georgia's labor market is open to the entry and export of talent, these graphs illustrate the oversupply and undersupply of recent Georgia graduates versus entry-level job postings that require the recent graduates' credentials for the most common programs of study.

### **Figure C: Technical Certificates and Credentials**

At the Technical Certificates and Credentials level, Business Management & Marketing certificates had the highest demand followed by Transportation & Moving Materials, and Homeland Security, Law Enforcement & Protective Services. Business credentials have 6 times the number of entry-level jobs than credentials conferred and similarly Transportation credentials have 4 times the number of entry-level jobs than credentials conferred – indicating the need to fill these jobs.

### **Figure D: Associate Degrees Demand**

At the Associate level, the most in-demand degrees are healthcare-related, which is in contrast to the oversupply at the Technical Certificate level. Healthcare-related degrees have 4 times the number of entry-level jobs than degrees conferred. Similarly, Business-related Associate Degrees are also in high demand, also having 4 times the number of entry-level jobs than degrees conferred. In contrast, Liberal Arts & Sciences are significantly oversupplied at the Associate level, having more than 10 times the number of degrees than there are entry-level jobs.

### **Figure E: Bachelor's Degree Demand**

The biggest gaps at the Bachelor's degree level were in Business and Computer Science. Business degrees have 3 times the number of entry-level jobs than degrees conferred and, similarly, Computer Science degrees have 7 times the number of entry-level jobs than degrees conferred. When comparing the number of degrees conferred to entry-level demand, Georgia's numbers align with the national average for Business degrees, but falls slightly below the national average for the number of degrees conferred for Computer / Information Science. There is a real opportunity to

increase the number of degrees in this area, as Atlanta is a clear leader and “outpaces the nation in tech talent growth,” according to the 2016 CBRE Tech Talent Report. Because of the shortage of degrees conferred locally, there is a record number of people in this field moving to the region.

## 2. Skills Gap: Quality of Core Professional and Baseline Skills

The most in-demand areas are in the fields of business and computer science, so it makes sense that 10 of the top 15 most in-demand core professional skills are business and technology related. Sales and accounting skills have remained consistent from 2010 to 2015 ranked #1 and #2 respectively, with mathematics rising from #18 in the 2010 ranking to #5 in 2015, as shown in Figure F. Factoring the programming languages together, the importance of programming skills, in general, becomes quite apparent.

- i. Business, Technology, and Nursing Jobs:** The data showed that business, technology, and nursing represented the most employer-reported, in-demand skills, credentials, and degrees. Three of the top five occupations, by salary, are IT-related and represent two of the three highest occupations for projected demand growth, as shown in Figure H. Additionally, there is a projected 25% increase in-demand for accountants and auditors, as well as a high future demand for healthcare professionals (especially nurses) in Georgia.
- ii. Technical Skills and Occupation:** Sales and accounting are consistently the most in-demand skills in Georgia; computer programming language skills such as SQL, Oracle, and JAVA have fallen slightly in the rankings since 2010; however, programming languages combined represent the greatest demand overall, as shown in Figure F. IT occupations represent almost 30% of the total number of job postings for the top 15 occupations in Georgia and 35% in the ARC.
- iii. Postsecondary Credentialing/Education:** Healthcare and business programs of study are undersupplied at the Associate and Certificate level of education, while Liberal Arts programs are oversupplied by nine-to-one; however, four of the top five most in-demand baseline skills are inherent to liberal arts programs. Employers are looking for well-rounded candidates that have a combination of technical and soft skills. Business Management & Marketing and Computer/Information Sciences programs are undersupplied at Bachelor’s degree level, while Education, Biological & Biomedical Sciences, Psychology, and Visual & Performing Arts programs are oversupplied when compared to employer demand.

## ADDRESSING THE GAPS

Georgia’s secondary and higher education systems routinely develop new course offerings and programs based on employer demand. However, if students do not pursue those options due to lack of awareness or interest, talent gaps will persist. To better inform students, job seekers, and public policy decision-makers of the opportunities and challenges that exist, each must be equipped with timely data. This information should include which occupations are in-demand, what skills are needed, and which postsecondary credential or degree programs align with these jobs.



While the attainment of a four-year degree is commonly held up as a predictor of future success, today's marketplace indicates this is not the case in all circumstances. Anthony Carnevale, who directs the Georgetown University Center on Education and the Workforce, has been analyzing high-wage earners with a postsecondary education and those without a degree. "It is getting to be more about your field of study and less about your education level," he says. "A Bachelor's degree does not always guarantee a well-paying job in some fields." Career counseling is critical to increasing positive outcomes for students and job seekers and should be interwoven throughout the lifetime learning continuum.

Raising awareness within the entire talent pipeline will be optimized if all partners are engaged in information sharing, including students, parents, employers, educators, nonprofits, and government agencies. Likewise, maximizing skills training initiatives necessitates a hands-on approach by employers who review and define skills requirements. Employer identified skills could then be incorporated into classroom instruction and workforce training programs to increase career awareness.

### **Recommendations for improving alignment of technical skills include:**

1. Inform the talent ecosystem about employer demand.
2. Improve student and job seeker career opportunity awareness across all education and workforce systems.
3. Enable employers to provide feedback on postsecondary program material, training provider content, and nonprofit skilling courses.
4. Build employer consensus around core professional skills and develop corresponding definitions. Use these standard definitions to inform training providers and adjust curriculums to increase the development of work-based technical skills.
5. Secure employer commitment to specify preferred major/program area on job postings to improve data integrity and better align specific demand.

While Georgia's schools, local agencies, and nonprofits already incorporate some soft skills training and development, expanding and enhancing these efforts across all levels of education and training is necessary to improve student, job seeker, and ultimately employer outcomes. This will require increased focused interaction between employers and educational institutions which will (a) grow alignment of student and job seeker skills training content and exercises for in-demand opportunities and (b) provide employers with easy access to aligned talent for open roles.

During the research phase, it became apparent that there is widespread ambiguity and a need for clarity around the term "soft skills." While every employer desires an employee to have the requisite soft skills to perform in the position, and nearly every employer prioritizes the need for soft skills, each defines the term differently. Taking the following steps to clarify the definition of soft skills, will also create opportunities for practicing these skills in a work-based context:

1. Employer alignment on a prioritized list and definitions for soft skills.
2. Employers/higher education's incorporation of defined skills into existing curriculum and training programs.

## GEORGIA'S OPPORTUNITY

Georgia has an incredible opportunity to optimize student, job seeker and employer outcomes. In fact, the state has already taken steps to identify in-demand careers through Governor Deal's High Demand Career Initiative. Georgia is fortunate, in that it currently has jobs in place for students and job seekers who upskill, as well as employers who are committed to recruiting local talent. Georgia is home to a phenomenal ecosystem of nonprofits and administrators with existing skill-building programs and infrastructure that can be modified to align with demand. Furthermore, both postsecondary credentialing and higher education institutions are committed to engaging employers and incorporating feedback that helps align students with strong employment outcomes.

Georgia has jobs for those seeking employment and the necessary infrastructure that makes the state a global hub for transporting goods and moving people. Georgia also has the support network of people and institutions to improve employment outcomes and to educate students and job seekers in sustainable skill sets. It is time to support students and job seekers in their decision-making and to optimize Georgia's workforce for the betterment of our state. Please join the effort. Log into [www.yourtalentyourfuture.org](http://www.yourtalentyourfuture.org) to learn more and access additional reports addressing how students / job seekers, employers, and policymakers / educators can be involved.

## PARTNERS

This initiative, undertaken jointly by MAC and Accenture, began in the fall of 2015 and was spearheaded by the Chamber's Education and Workforce Council, a newly formed steering committee that includes key public and private sector partners, some of whom are directly engaged in education from kindergarten through higher education and beyond. Also, human resources professionals, career readiness counselors, and other workforce experts were drawn from government and private industry to participate in the initiative. These partners have and will continue to advise on data collection and analysis, provide context, and develop recommendations for improving job placement outcomes. In addition to MAC members, public partners leading the launch of this project include the Atlanta Regional Commission (ARC), Georgia Department of Economic Development – Workforce Division (GDEcD), Georgia Department of Education (DOE), Georgia Department of Labor (DOL), Technical College System of Georgia (TCSG) and the University System of Georgia (USG).

## A. Top Programs of Study-Georgia

### Trend of Degrees & Certificates Pursued by Students

4 of top 5 programs of study chosen by students in 2014 were also in the top 5 ten years ago; the Computer/ Info Sciences program of study has fallen 3 spots in the rankings since 2004.

**Trends in Top Programs of Study in Georgia** (by # degrees/certificates conferred by academic year)

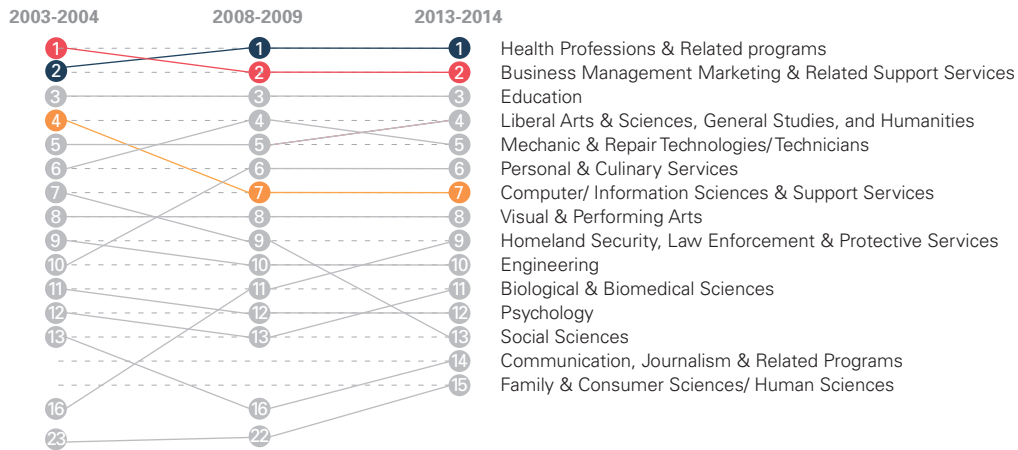


Figure A: Top 15 Most Popular Programs of Study

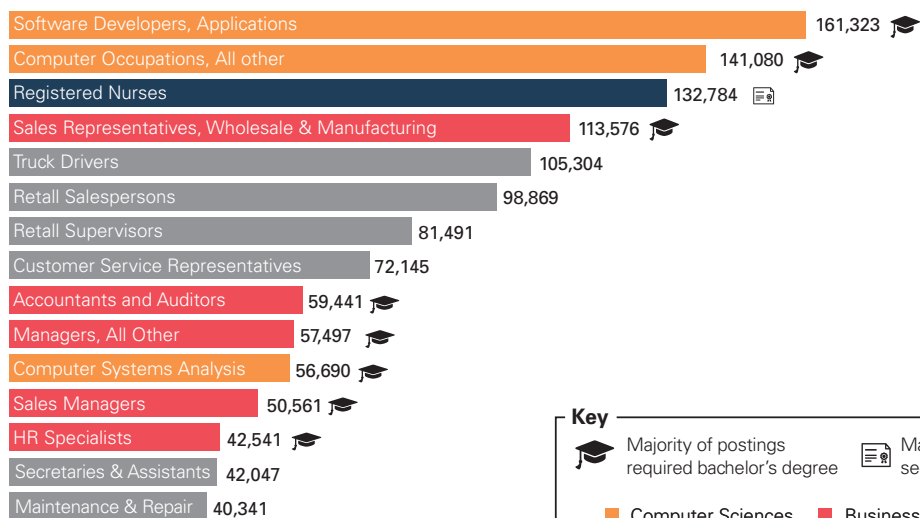
## B. High-Demand Occupations-Georgia

### Top 15 Occupations by Job Postings

In Georgia, there is a high demand for IT and Sales professionals; 60% of the top demanded occupations require a postsecondary degree.

**Top 15 Demanded GA Occupations** (by number of Jobs posted from Jan 2007 - Dec 2015)

Total # of Jobs postings for top 15 occupations → 1,255,690



40% of the top 15 occupations have a majority of postings requiring only a high school education

IT occupations represent almost 30% of the total number of job postings for the top 15 occupations

Figure B: Top 15 Occupations by Number of Job Postings

### C. Talent Gaps (Certificates and High School/Credential Demand)

*Program Awards vs. Occupational Demand*

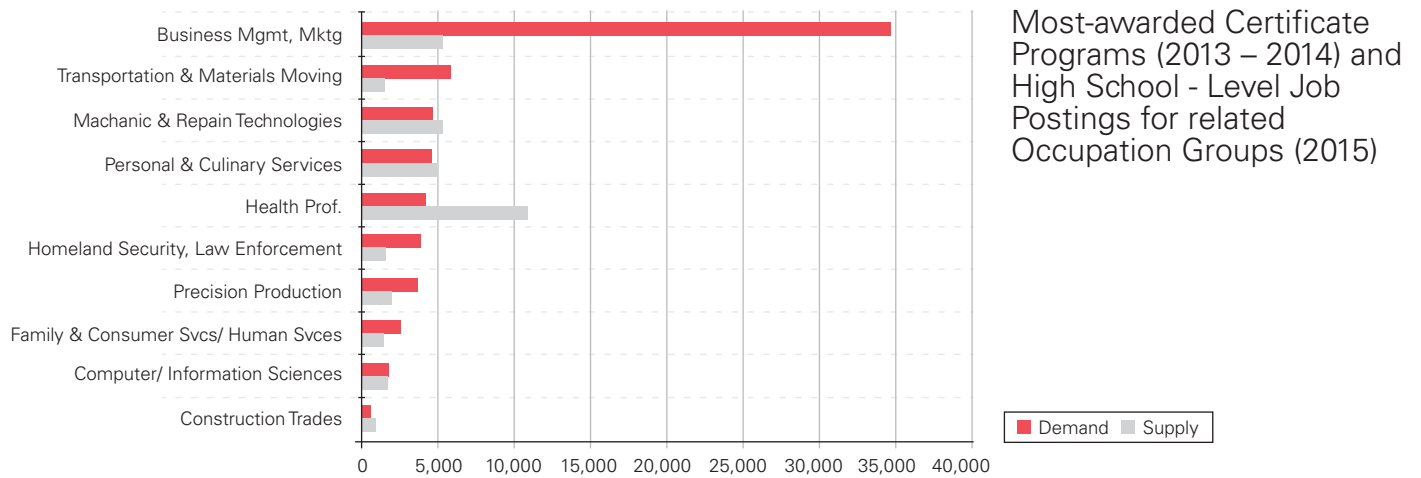


Figure C: Technical Certificates/Credential Entry-Level Talent Gap

### D. Talent Gaps (Associates Degrees)

*Program Awards vs. Occupational Demand*

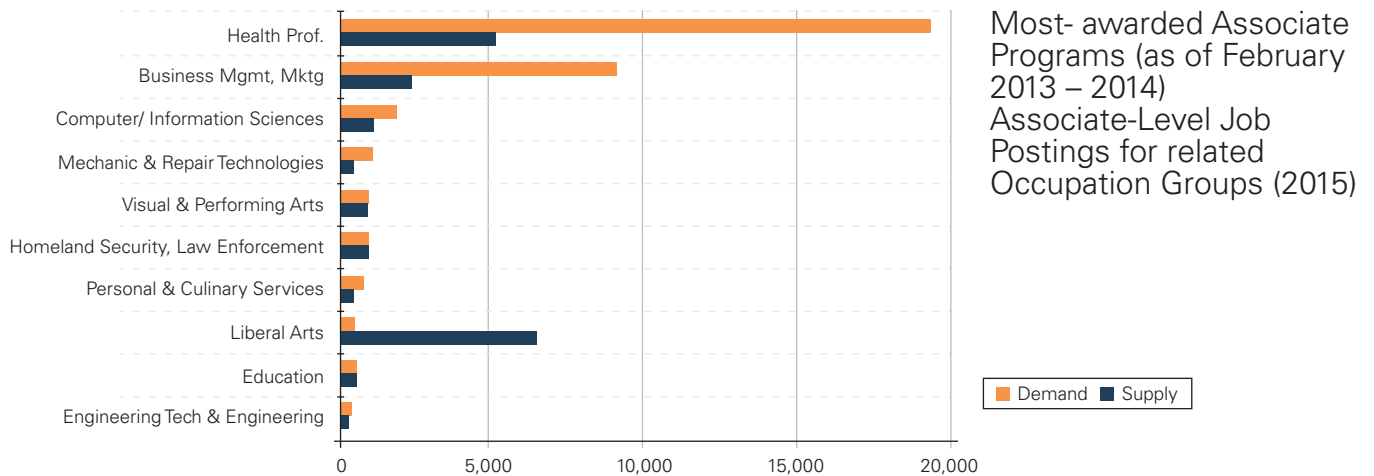


Figure D: Associate Degree Entry-Level Talent Gap



## E. Talent Gaps (Bachelor's Degree)

Program Awards vs. Occupational Demand

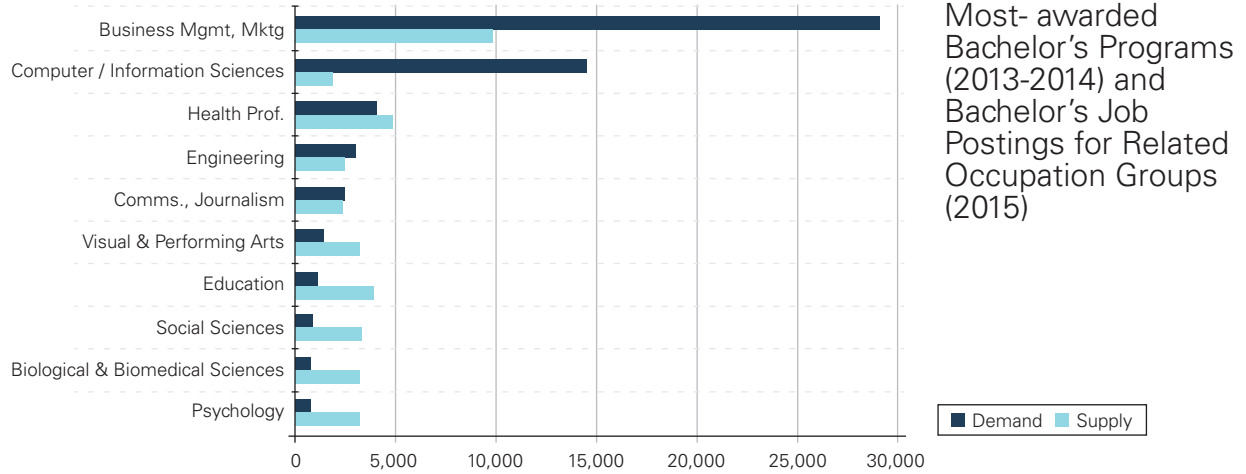


Figure E: Bachelor's Degree Entry-Level Talent Gap

## F. High-Demand Skills-Georgia

Most Demanded Hard Skills

Top 15 Hard Skills in GA (by number of jobs postings from 2010 and 2015)

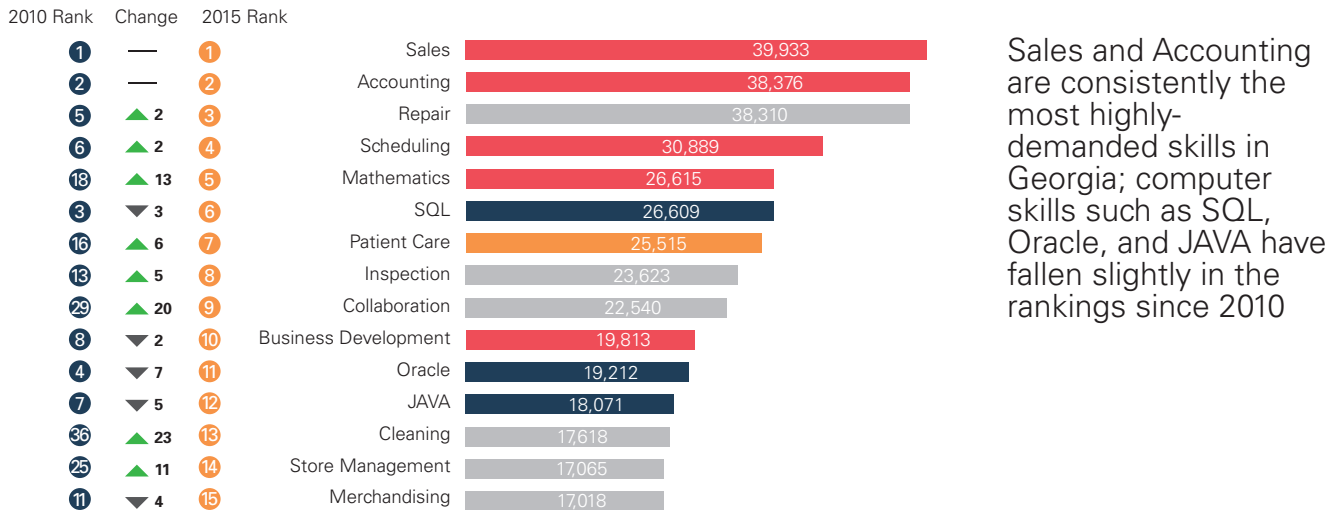


Figure F: Most In-demand Hard Skills

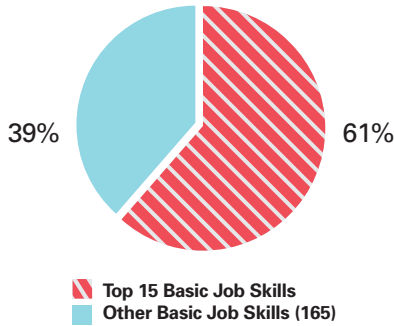
Health Care Business Computer Sciences Other

## G. Skills in High Demand-Georgia

### Most Demanded Baseline Skills

The top 15 basic job skills by job posting frequency are more highly demanded than the other 165 skills combined; soft skills are strongly represented as 9 of the top 15 basic job skills.

GA Basic Job Skills Distribution (2015 Job postings)



GA Top 15 Basic Job Skills (by Job postings frequency on 2015)

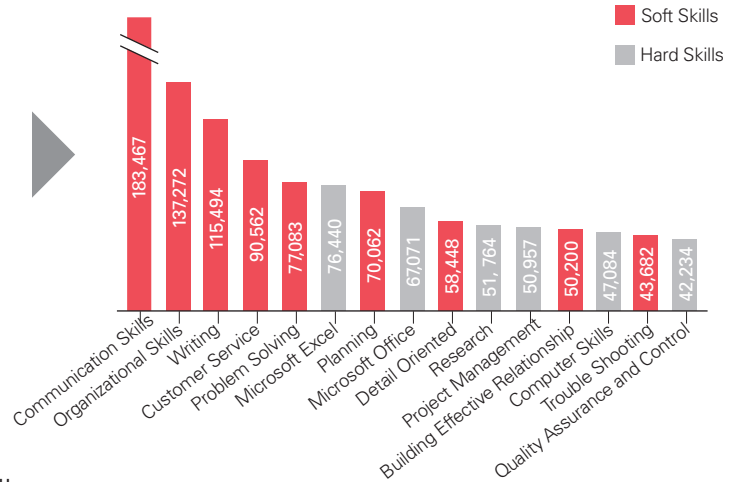


Figure G: Most In-demand Baseline Skills

## H. High-Demand Occupations-Georgia

### Projected Occupation Growth Rate and Mean Salary

Three of the top five occupations, by salary, are IT-related and represented two of the three highest projected demand growth rates; there is a 25% projected demand increase for accountants / auditors.

Top 15 Occupations in Georgia - Growth Rate and Mean Salary (by number of jobs posted from Jan 2007 - Dec 2015)

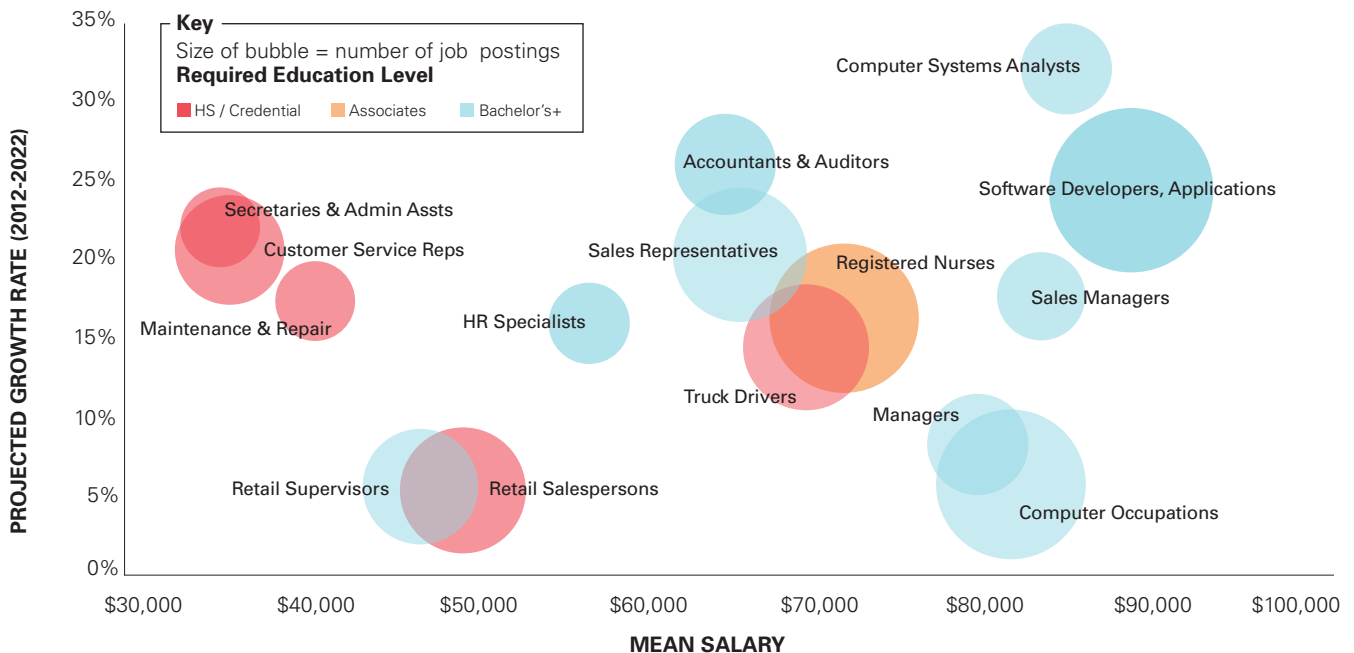


Figure H: Projected Occupation Growth and Magnitude of Demand, and Mean Salary

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National Work Readiness Council. Web. Feb.-Apr. 2016

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Tax Foundation. State to State Migration Data, 2000-2010. Web. Feb.- Apr. 2016.

U.S. Census Quarterly Workforce Indicators. (QWI), 2014 Q4. Web. Feb.-Apr. 2016.

## Data Notes:

Related Occupation Group job posting data was created by matching 2-digit CIP programs to 2-digit SOC occupation groups through the ONET crosswalk - postings are not mutually exclusive across programs

Job Postings data includes postings that explicitly require 0-2 years of experience and a percentage of postings without specified experience extrapolated to isolate immediate post- education opportunities

Analysis does not reflect a closed talent market- migration is unaccounted for

IPEDS Data from 2013- 2014 for Georgia Higher Ed, Burning Glass data from full year 2015

Burning Glass data from full year 2010 and full year 2015

**Special Recognition to those who assisted in this effort:**

- Atlanta Regional Commission
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- Office of House Speaker David Ralston
- Office of Lieutenant Governor Casey Cagle
- Technical College System of Georgia
- University System of Georgia
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- Stacy Krueger, PulteGroup
- Mike Kenig, Holder Construction
- Debbie Miller, Mohawk Industries



PURPOSE

