# Building a 21st-Century Workforce

The 21st-century economy requires a workforce equipped with the critical thinking training that lays the groundwork for coding and information management skills. However, our education system is failing to keep pace with the growing demand for American workers with computer science backgrounds and qualifications.

While the public knows the story of Silicon Valley, ACT | The App Association's membership of small and mid-size businesses encompasses all 435 congressional districts with a majority outside of traditional coastal tech hubs. Many of our members report a persistent challenge to find American workers with computer science qualifications. This undermines their ability to compete on the global stage and hampers economic growth.

Despite providing a median annual salary exceeding $88,000, more than 500,000 computing jobs remain unfilled in America. With just 65,000 U.S. college graduates earning computer science degrees each year on average, recent American graduates are filling a mere fraction of the 500,000 available computing jobs. Moreover, the number of computer and information technology occupations is projected to grow 12 percent from 2018 to 2028, much faster than the average for all occupations in the United States—with the number of software developing jobs expected to grow by 21 percent.

This problem is not exclusive to the private sector. Cyberwarfare is an increasingly prevalent threat in foreign affairs, and federal cybersecurity specialists are more important than ever. The Center for Strategic and International Studies projects that only 1,000 security specialists in the United States have the specialized skills to operate effectively in cyberspace compared to a need for 10,000 to 30,000 personnel, and a project by the National Initiative for Cybersecurity Education found 507,924 cybersecurity openings across the country from June 2019 to May 2020.

The private sector can help, but policymakers must create an environment in which employers and educators can equip those in our current and future workforce with the skills needed to fill and succeed in these positions. Today, only 45 percent of all high school classrooms teach computer science skills, and these classes continue to lack girls and underrepresented minority students.

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## To Support the Growth and Potential of the Dynamic American Workforce, We Urge Congress To:

- Pass the **CHampioning Apprenticeships for New Careers and Employees in TECHnology Act (CHANCE in TECH Act, H.R. 1733 / S. 777)**. This legislation would require the Department of Labor to enter into competitive contracts with intermediaries that manage apprenticeship programs on behalf of employers. By enabling would-be employers to streamline their apprenticeship processes, which many employers need to fully train developers and others, the CHANCE in TECH Act would help connect workers to the employers that need them.

- Appropriate at least $250 million to the science, technology, engineering, and math (STEM) Master Teacher Corps (MTC) program. Our schools' failure to provide computer science courses is rooted in part in a lack of training and professional development for teachers to attain an advanced formal education in teaching computer science. Congress must adequately resource the STEM MTC program to prepare our kids for the jobs of the future and maintain our position as the global leader in tech-driven industries.

1401 K Street NW  Suite 501
Washington, DC 20005

202.331.2130
www. ACTonline.org

@ACTonline
/ACTonline.org