

Chairman Dolan, Vice Chair Cirino, Ranking Member Sykes and members of the Senate Finance Committee. Thank you for allowing me to submit testimony on House Bill 33.

My name is Codeye Woody, and I serve as the Director of State Government Affairs for Code.org, an innovation nonprofit dedicated to the vision that every student in every school has the opportunity to learn computer science (CS) as part of their core K-12 education. I am here today to represent a much larger coalition of Ohio small businesses, business advocacy groups, major corporations, and chamber of commerces in support of computer science. You can see the over 45-member coalition attached to my written testimony.

Last budget cycle, this body supported a State Committee on Computer Science to develop a state plan for computer science education. We thank Governor DeWine for including many of the plan's key provisions in the executive budget proposal, most significantly, \$37 million over the biennium to support computer science programming across the state. Unfortunately, in the House passed version of the budget, many of the computer science recommendations and all of the funding were removed.

I am here today to respectfully ask this committee to reinstate some of the computer science funding and language. Specifically (SC1252):

- Restore computer science funding to a total of \$24 million over the biennium.
- Include Teach Computer Science Grants to upskill teachers and provide professional development. This funding will get more teachers in the field teaching computer science and prioritize school districts that are underserved or do not have a computer science course.
- Fund the Computer Science Promise. This program gives students the opportunity to take computer sciences courses if their school district does not offer them at no cost to the student.
- Fund the Computer Science Council to support computer science afterschool programs, summer camps, and educational enrichment partnerships in all 88 counties.

You may ask, why is this needed? Simply put, supporting computer science education today will help Ohio fill the in-demand jobs of tomorrow.

According to the Bureau of Labor Statistics, overall employment in computer and information technology occupations is projected to grow 15 percent from 2021 to 2031, much faster than the average for all occupations; this increase is expected to result in about 682,800 new jobs over the decade. The median annual wage for this group was

\$97,430 in May 2021, which was higher than the median annual wage for all occupations of \$45,760.

While computer science education is clearly important to Ohio's economy, it is also crucial for our national security and cybersecurity. As cyber-attacks on American systems continue to grow, America's ability to defend itself against these attacks are not. From 2006 to 2014, there was a 1,121% increase in security incidents, from 5,503 to 67,168.

For example, in just one day, a "glitch" was blamed for causing the suspension of trading on the New York Stock Exchange for nearly four hours, the grounding of all United States Airlines flights, and the malfunction of the Wall Street Journal's website.

To protect against these threats, a report from the Center for Strategic and International Studies estimated that the United States needs between 10,000 and 30,000 security specialists.

This shortage stems from a lack of qualified workers in computer science. I included job statistics in my written testimony to support this, but I will highlight one stat in particular: from January 2022 to December 2022, there were 18,504 total cybersecurity jobs opening in the State of Ohio.

- According to Cyberseek, from January 2022 through December 2022, there were 194,000 openings for Information Security Analysts, but only 141,000 workers currently employed in those positions – an annual talent shortfall of 53,000 workers for cybersecurity's largest job.
- There are 561,743 additional openings requesting cybersecurity-related skills, and employers are struggling to find workers who possess them. On average, cybersecurity roles take 21% longer to fill than other IT jobs.
- From January 2022 to December 2022, there were 18,504 total cybersecurity jobs opening in the State of Ohio.
- The top job titles requested by employers within the cybersecurity job market in Ohio include: cybersecurity analyst, cybersecurity manager, software developer, systems engineer and technical support analyst, to name a few.

Cybersecurity workers protect our most important and private information, from bank accounts to sensitive military communications. However, there is a dangerous shortage of cybersecurity workers that puts our digital privacy and infrastructure at risk. We can help shrink this number by exposing students to computer science at a young age.

In closing, we ask this committee to include SC1252 in the Senate's version of the operating budget to reinstate and fund computer science in HB 33. By restoring these provisions, the Ohio Senate is investing in yet another tool in our toolbox to address the needs of Ohio's employers.

Computer Science Advocacy Coalition

Date: May 16, 2023

To: Members of the Ohio Senate Finance Committee

Re: HB 33 State Operating Budget for FY 24 & 25

Dear Ohio Senate Finance Committee,

Thank you for your continued dedication to the success of Ohio's job creators and growth of our State. The Ohio General Assembly has displayed a commitment to build Ohio's workforce and ensure Ohioans have the skills necessary to pursue in-demand jobs. These efforts have propelled the workforce in the Buckeye State – but there is more work to be done, especially in the computing and technology field. The undersigned organizations have come together to advocate that the Ohio House and Senate maintain the Governor's efforts in the budget to advance and expand computer science access in our state.

The policies currently in the budget align with the recommendations that were published from the State Committee on Computer Science (SCCS). The SCCS was established by the General Assembly in the last operating budget (HB 110) and tasked state agencies, business leaders, institutions of higher education and computer science advocacy organizations with delivering actionable recommendations on how to increase access to computer science education. Ohio can become a leading state in computer science education and prepare our future generations for careers in a variety of industries by creating an Office of Computer Science Education, enacting "Ohio's CS Promise" which guarantees students have the opportunity to take at least one computer science class per year, and expanding teacher licensure and professional development in computer science education.

Recent economic development wins in our state highlight the growing need to have a workforce skilled in computer science and related fields. By implementing these policies, the State of Ohio will send a clear message to both job creators and young people that Ohio is ready to commit to the jobs of the future.

Inaction could jeopardize Ohio's ability to attract future economic development projects since the state is already facing a workforce shortage. In 2022, the state had an average of 18,000 computing jobs open each month with a median annual salary of \$86,642. Yet, there were only 1,842 computer science college graduates in 2019, which left many of these jobs unfilled.

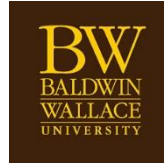
The recommendations in the Governor's budget proposal will not only help build a workforce to fill these jobs but will also improve Ohio's national ranking of 34th in high schools who offer computer science courses. Currently, only 48% of Ohio's public schools offer any type of computer science course, including 57% of suburban districts and 55% of rural districts. Only 47 urban school districts offer computer science education. These statistics show the inequity and lack of K-12 computer science access across the state for all students.

Thank you again for your commitment to meeting Ohio's workforce needs and recognizing there is still more work to be done. Now is the time to invest in computer science access to help fill the jobs of today and the future. We look forward to continuing our collaboration to help the State of Ohio.

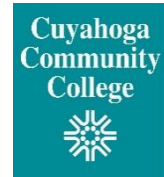
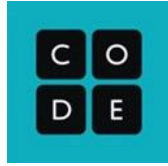
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