From the Cleveland Tech Talent Pipeline

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

My name is Chelsey Kohn, I currently serve as the Director of the Tech Talent Pipeline for the Cleveland Metropolitan School District & Cleveland State University. From 2015-2021, I served as the founding Principal of John Marshall School of Information Technology, the first high school in Ohio to focus on Computer Science. In 2022, I worked with teachers across the State of Ohio to update our K-12 Computer Science standards. As a result, Ohio became the first state to provide exposure for students in emerging technology fields such as the Internet of Things and Quantum Computing. I also had the privilege of serving on the State Committee on Computer Science where we used data to understand the needs of every region in Ohio.

Since 2014, I have worked to expand access to Computer Science in the Cleveland Metropolitan School District. Partnership with Cleveland State University allowed us to support new Computer Science teachers with $4.8 million from the National Science Foundation and the Cleveland Foundation. This allowed support for 32 CMSD teachers, which has impacted 17 high schools and 13 pK-8 schools. CMSD now has over 2,500 high school students enrolled in a Computer Science class this school year. In addition, we also support high school IT Internships. Last year we placed over 100 high school students in paid IT Internships. This year we are on track to place over 150 students at 8 different sites including NASA Glenn Research Center and the Cleveland Clinic.

In 2022, we hosted the first in-person Quantum Computing workshop for high school students in the US – providing exposure to the emerging careers that will follow the installation of Quantum System One at the Cleveland Clinic. This Spring, we have 8 high school students completing a CompTIA A+ Bootcamp with Urban City Codes. We are working with the Greater Cleveland Partnership to set up an IT Pre-Apprenticeship for this coming school year. Our partnership with the Great Lakes Science Center provides support to over 100 students participating in FIRST Robotics Competition, an organization with the highest matriculation rate for students entering STEM degrees.

I am here today because I believe Computer Science Education is one of our most critical workforce development strategies in the State of Ohio. If we fail to address this gap, we will have negative consequences for our workforce and our future economic stability.

Access to Computer Science education is the primary step in workforce development for cyber security – one of our most pressing national security issues. In addition, computer science is impacting the evolution of manufacturing with industrial robotics and the Internet of Things, commonly referred to as IoT. Computer Science is quickly advancing our healthcare systems and careers with Data Science, Quantum Computing, and the Hybrid Cloud – making it easier for health professionals to spend more time focusing on patients and bringing more effective and individualized drug therapy to patients in a shorter amount of time. Even agriculture continues to be significantly impacted by Computer Science and IT innovations. Our world is changing, but most of our students in Ohio have no access to these new skills. We need a growing Computer Science & IT workforce, but the majority of students in Ohio do not have exposure or access to Computer Science coursework.

All students in Ohio deserve access to Computer Science education.

I am not stating that every child in Ohio should choose to *pursue* a career in Computer Science, I am, however, advocating for every child in Ohio to have the *option* and the *choice* to fill these high need positions within our state. Funding programs that allow our homegrown Ohio students to fill these jobs should be our priority over H-1B1 Visas. Our most underutilized workforce strategy is our K-12 education programming.

There is one solution to provide Ohio students access to Computer Science – teachers. We do not have enough Computer Science teachers in the State of Ohio.

There are 3 areas I want to highlight in support of our Computer Science teachers.

1) Funding computer science teacher licensure programs. This is referred to as "Teach CS" grants in the report from the State Committee on Computer Science. This provides licensure program funding and teacher stipends. These programs allow for Ohio to increase our number of Computer Science teachers.

2) Not requiring funding - Renewing the Computer Science waiver to protect current teachers pursuing licensure programs.

3) Not requiring funding - Computer Science Licensure revisions within the Ohio Department of Education. Our current licensure is antiquated. Without updates, we will not reach the number of Computer Science teachers we need.

Please note, 1 teacher impacts an average of 120 students per year. If we want to prioritize Computer Science as a workforce development strategy, then we will provide support for Computer Science teachers.

I thank this committee for your time and support of Computer Science education and welcome your questions.