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I am honored to have the opportunity to provide testimony today on behalf of Zarek Drozda. As a Director of Data Science 4 Everyone which is an education policy initiative based out of the University of Chicago, Zarek has made significant contributions to the field of data science education, leveraging his extensive experience and expertise. His testimony is in support of funding for Ohio's data science pilot program which allows math teachers to bring important 21st-century skills into the classroom.

Ohio has been a national leader in data science education, having been the first state in the country to conduct a statewide pilot program for data science. This initiative has been incredibly successful, with 28 school districts and 20 Educational Service Centers participating and students gaining valuable skills in data analysis and problem-solving. The primary source of funding for this initiative has been COVID-19 relief dollars, which are expiring, so it is imperative that we continue to invest in this program to ensure its success and sustainability.

As Ohio is poised to become home to Intel's chip factory in central Ohio, it is increasingly crucial that we give every student the opportunity to succeed in the technology industry. Ohio's Data Science Pilot Program is a key component of achieving this goal, providing students with the skills and knowledge needed to excel in high-demand industries such as healthcare, finance, and technology. Exposure to data science can also be helpful for careers in small businesses, and as legislators, you already know that gathering and making sense of data from your districts is an important task. Many Ohio students may not otherwise have the opportunity to gain data skills because less than half of Ohio public schools (48%) have a computer science teacher. That will likely continue given national and local teacher shortages.

By investing in data science education for our students, we are helping to secure Ohio's economic future by preparing our students for career opportunities in these fields, including those that may arise from Intel's presence in the state. Additionally, investing in training math teachers to teach data science will bring 21st-century skills to students across the state, ensuring that Ohio's students are well-prepared for the workforce of the future.

According to the National Assessment of Educational Progress (NAEP), eighth-grade student achievement in Ohio for data analysis, statistics, and probability fell by 23 points over the past decade from 2011 to 2021. This decline is equivalent to 2.5 grade levels, indicating a decline in overall performance in this subject area by more than two full school years. In other words, the average 8th-grade student today has the same data literacy as a mid-year 5th grader in 2011. When looking at the student demographic breakdown, the scores for marginalized and underserved communities in Ohio show an even greater decline in data analysis, statistics, and probability achievement. This data highlights the need for continued focus and investment in improving data science and statistics education in Ohio schools, particularly considering the challenges posed by the COVID-19 pandemic on student learning and achievement.

Data science skills are becoming increasingly important for maintaining international competitiveness. As data becomes an increasingly critical fuel for the global digital economy, international peers including China, Israel, the United Kingdom, Germany, and New Zealand are making significant investments in data and computational thinking education – for both students and the workforce. In one example, Edinburgh invested $300 million to make the city the "Data Capital of the World." To address this issue and improve Ohio's national and international

competitiveness, it is crucial to invest in data science education and provide students with the necessary skills to succeed in the 21st-century economy. By doing so, Ohio can better position itself to compete on a global scale and ensure a brighter economic future for its citizens.

Investing in training math teachers to teach data science is an effective way to bring 21st-century skills to students across the state. It is estimated, if 1 in every 10 math teachers in the state could be trained to teach data science (or discrete math), the number of students significantly engaging in computer science skills would roughly double. Allocating additional funding or expanding eligibility for computer science funding to the training of math teachers, will allow for the continued professional development of Ohio's educators, ensuring that they have the knowledge and resources necessary to effectively teach mathematics and data science to their students.

HB 33 is a comprehensive bill that includes provisions related to the state budget and education. Initially, the bill included funding for computer science education, which is a critical investment in Ohio's students and future workforce. Unfortunately, the version of the bill that passed the Ohio House was stripped of any funding, which is a missed opportunity for Ohio to invest in its students and future economy. Investing in computer science and data science education, as well as teacher training, will help ensure that Ohio students are prepared for high-demand careers in industries such as healthcare, finance, and technology. I urge the committee to support provisions to HB 33 that include funding for these critical initiatives.

In conclusion, I urge you to support Ohio's Data Science Pilot Program and Mathematics Teachers Training funding. The impact of this program on Ohio's students and economy cannot be overstated, and it is essential that we continue to invest in this important initiative. Thank you for your consideration.