Thank you, Chair Senator Feldman, Vice Chair Senator Kagan, and members of the Education, Energy, and Environment Committee for the opportunity to support Senate Bill 980.

My name is Eric Davis. I was born and raised in Baltimore, Maryland, I currently reside in Reisterstown, Baltimore County, Maryland with my wife of 36+ years. I served in the US Army in several Military Occupational Specialties in Communications. I am a retired IT Manager from UPS and, currently, the Executive Director of the non-profit, STEM Center of Excellence Inc. (STEM CoE).

In 1978, at the age of sixteen, I entered University of Maryland, College Park in the Mechanical Engineering program. I was immediately placed in an Algebra class and pre-Engineering courses because my transcripts reflected a lack of prerequisites that are common for a high school graduate. I soon learned how far behind I was, academically, when compared to most first-year students entering the School of Engineering. Coupled with my age, I was in no way prepared for success in the Mechanical Engineering program. I lived on academic probation through my senior year when I finally gave up my dream. I realized my definition of success as a "C" student would get me nothing more than a college degree. If only I had been better prepared. I earned a B.S. in Marketing from University of Baltimore in 1997

UPS hired me, as a Systems Analyst, to develop software requirements for web-based services offered on UPS.COM. During my interview, the interviewer asked why I did not want to continue as a Software Developer. My answer, in my head of course, was that Requirements do not break on the weekend, software does. My point is that, had I not taught myself computer programming and had I not earned a marketing degree from University of Baltimore, nineteen years later after starting at University of Maryland, I would not have had the pathway to UPS as an option. It was the experience in Computer Science that got me into the door at UPS.

Since 2014, I have been volunteering at Robotics Competitions serving as judge, judge advisor, referee, and tech support because I saw the need to encourage students to pursue these pathways. I saw the need for students to know that someone who looked like me and heard my story of failures and roadblocks could still become successful with just a little help. Now I run STEM Gyms in Baltimore to host students participating in Robotics, AI, Drone, and soon underwater robotics competition. I have seen transformations take place when a second-grade student selects a code block that says drive 20 millimeters; adds the 2nd code block, turn right for 90 degrees; and then pushes the start button. The eyes light up, smiles break across the face, and the student has just written code to operate a virtual robot. If it were not for time, each student would still be at the computer adding on to the code. In computer programming there is the saying, "I hate to code; I hate to code. Oh wait, it works. I love to code." Learning computer science in elementary school and continuing the experience through high school opens countless pathways to success for our students of Maryland.

Requiring Computer Science in Elementary and Middle school is an initiative-taking approach to crime reduction by providing students with applicable skills to use outside of the classroom in engaging hands-on experiences like robotics, AI learning, and cybersecurity. Empowering students with the knowledge of Computer Science, Computational Thinking skills, and Critical Thinking skills, we are diverting youth attention from potential criminal behavior to stimulating, rewarding, and fun STEM-learning competitions. Computer Science is altering life trajectories. The sooner we give options, the better Maryland we have.

It is the repetition of affirmation that leads to belief. Once that belief becomes a deep conviction, things begin to happen. I urge you to approve Senate Bill 0980 and watch things begin to happen, for the better of Maryland.

In the article Computer science education and K-12 students' computational thinking: A systematic review, from Science Direct.com:
https://www.sciencedirect.com/science/article/abs/pii/S0883035522000866

The highlights state:

- This systematic review examined how CS education was implemented in schools and its efficacy for developing students' computational thinking (CT).

- Although educational interventions have not always been successful in CS education, this review provides strong evidence that overall, CS education promotes the development of students' CT in the K-12 setting while improving their creative and critical thinking skills.

- When integrated into other subjects, CS education increases students' motivation, commitment, participation, and interest in the subject matter.

- We recommend early access to CS education, various innovative instructional approaches to CS education and appropriate support and guidance for student learning. Also, there is a need for professional development opportunities for CS educators.