

Testimony by
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FIRST (For Inspiration and Recognition of Science and Technology)

Chairman Smith, Vice Chair Schuring and members of the committee. Thank you for the opportunity to speak today. I’m Elizabeth Heym. I am a freshman at The Ohio State University.

I came to the Bexley High School *FIRST* Robotics Team with no robot creation skills, and by the end of the season I had learned how to use the SolidWorks computer aided design software, whereby I could model the components of the robot, providing proof-of-concept and the potential for 3D printing parts. By my second year on the team, I was the Computer Aided Design Lead, providing me the opportunity to teach others how to use this software, which is used by mechanical engineering professionals as an industry standard.

I am currently a first year engineering major at The Ohio State University. At the beginning of my first semester, I joined the Supermileage project team, which works at the Center for Automotive Research to build a one-person fuel-efficient car. After only a couple of weeks, my computer aided design skills, which I had developed on my high school robotics team, had become evident and I was appointed to be the Computer Aided Design Team Lead. This made me realize just how impactful *FIRST* had been, already putting me a step ahead, getting me noticed among senior mechanical engineering students with internships under their belts.

Similarly, before joining my *FIRST* robotics team I had never programmed anything, and hardly even knew what programming really was. Two years later, I am currently studying computer science, which would have never happened if not for my experience on the *FIRST* robotics team. Because of my programming experience, and my ability to speak about concrete applications in programming, I was able to get an internship this summer as a software engineer, further revealing how far ahead *FIRST* has put me, giving me opportunities that will lead to even more opportunities in the future.

Being an honors student at The Ohio State University, I am taking the Fundamentals of Engineering Honors robot class, in which teams of four design, build, and program a robot to compete against other teams. Though this is an honors engineering design competition, *FIRST* robotics has, in fact, over prepared me for this experience. In high school, I experienced more advanced programming concepts and built more complex mechanisms than in my honors college-level engineering class. I was already

familiar with how to operate tools like a drill press and how to 3D print parts for the robot and felt far more comfortable even though I was the only girl on my team. Our robot ended up completing a perfect run in the individual competition, which I attribute to having two *FIRST* Robotics alumni on the team.

Ultimately, *FIRST* has directly led to opportunities that would never have been presented me without *FIRST*. I owe so much to *FIRST* robotics and earnestly hope that more people can have the same wonderful experience with *FIRST* robotics as a result of the state helping support development of new and existing teams.