

Student Recipient



Mark Williams

Mark Williams is a sophomore at Lake Oswego High School. He is one of the lead students on ToborTech, a high school robotics team. ToborTech recently completed in the FIRST World Championship in Houston, Texas.

In the early days of the COVID-19 outbreak, Mark realized he could use his unique skills and resources to support the community. He learned of the issue of personal protective equipment shortages among health care workers and began a discussion with his robotics

team. Mark founded a student-led program called Create4pdx to make 3D-printed face shields for hospitals, medical professionals, and frontline workers. At that time, healthcare workers in Portland were allotted as little personal protective equipment as one surgical mask per day. The 3D-printed face shields provided an added layer of protection that really was not available in large supply at the time. The word got out to the healthcare community and the team began receiving requests from small clinics, dentists, and assisted living facilities, for their entire staff. Even the Oregon Department of Health and Human services needed assistance and the team delivered 150 face shields. Deliveries were free and expenses were covered by a mix of grants, community donations, and even a large donation from Xerox. In addition to delivering face shields, Mark and the team designed a new face shield which they adjusted to create a more secure fit for multiple sizes. They published the new design on an open source website so anyone could access and produce it. Since the new design used half the material as the original model, they were able to double manufacturing speeds and significantly cutting costs for other producers around the United States.

In Mark's own words, the face shields "helped dozens of employees return to work after small medical businesses had been shut down for months of the pandemic. While the robotics team did initially take a financial loss from the program, the resulting goodwill afterwards more than replenished the funds we had spent."