Testimony to the Maryland Vision Zero Committee

My name is Arjun Samavedam, and I am a junior high school student studying at Montgomery Blair High School, Silver Spring, Maryland, with a deep passion for road safety.

I have been a Vision Zero Youth Ambassador during the 2022-23 and 2023-24 sessions for Montgomery County, Maryland. From December 2022 to May 2024, I contributed to Vision Zero initiatives by designing and building a Traffic Garden space for the Safety Day event. This interactive space replicated a neighborhood environment, allowing attendees to simulate road safety lessons. Additionally, I created video content for school walk and bike safety, which was distributed via social media to reach a broader audience. These efforts not only educated the public but also fostered a sense of community responsibility in me.

Today, I am writing to advocate for greater outreach to students like me to leverage emerging technologies and prototypes to address road and pedestrian safety issues. Our students in the state of Maryland have incredible opportunities to present at county and state level science/ STEM fairs, such as:

- Montgomery County Area Science Fair (*ScienceMONTGOMERY)*
- Prince George's Area Science Fair
- Anne Arundel County Regional Science and Engineering Fair
- Frederick County Science and Engineering Fair
- Science Fair Competition of Maryland
- Maryland STEM Festival

I urge the Maryland Vision Zero Committee to collaborate with these county level science fairs as a community awards partner to further engage young innovators in this critical mission.

Personal Experience: Learning to Drive

As someone currently learning to drive, I have become acutely aware of the importance of safe driving practices and the dangers of distracted driving. Through my experiences, volunteering, and involvement in innovative projects, I have seen firsthand how technology and community engagement can play critical roles in saving lives and preventing accidents.

Personal Experience: Using Technology to Addressing Road Safety Challenges

As a student, I am deeply passionate about leveraging STEM and technology to address real-world challenges, particularly in the realm of road safety. Over the past several years, I've worked on innovative road safety projects and I describe some of my projects below to demonstrate that innovative ideas and solutions can come from young students like me that can make a difference:

- *Detecting Inactivity: Using Touch Sensors on Steering Wheel to Alert Drivers:* While in 6th grade, I worked on building an apparatus that attempted to detect driver inactivity on the steering wheel using a capacitive touch sensor, and submitted this project to the *ScienceMONTGOMERY* fair.

- *Built a prototype for "Breaking the Distraction":* During 9th grade, I worked on an Alerting Device for Drowsy and Inattentive Drivers where my prototype focused on alerting drivers when they become drowsy or inattentive at the wheel. Such technologies can be integrated into vehicles to prevent accidents caused by driver fatigue or distraction. I submitted this research to *ScienceMONTGOMERY* fair that year and was recognized with a 1st place award in Engineering Category as well as by the Society of Science Community Innovation Award.
- *SixthSense - Wearable AR and Haptic Solution for the Hearing Impaired*: Earlier this year, I designed a non-invasive assistive haptic device to alert the hearing impaired community about vehicular sirens and horns, which could help them be safer while out on the local roads as pedestrians. I recently submitted this work to the *ScienceMONTGOMERY* fair in March this year, where I was fortunate to be recognized by several community awards.

Call to Action: Collaborating with student researchers at County-level Science Fairs

I urge the Maryland Vision Zero Committee to collaborate with several county-level science fairs as a community awards partner to incentivize innovation in pedestrian, bicycle, and traffic safety projects. These science fairs would be an ideal partner for expanding outreach and recognizing student contributions to road safety innovation, and the committee can consider to:

- Sponsor a **Road Safety Innovation Award** at the science fair to highlight projects that address pedestrian, bicycle, and traffic safety.
- Provide **mentorship** opportunities for students working on road safety-focused science fair projects, connecting them with experts in transportation planning or development.
- Showcase **winning projects** at Maryland Vision Zero events to inspire broader community engagement.

This collaboration would not only amplify student voices but also align with Maryland's Vision Zero goals by fostering innovative solutions from within the community. By empowering young innovators and fostering collaboration with county-level organizations, we can inspire creative solutions and build safer streets for everyone in Maryland.

Conclusion

As a student innovator passionate about road safety, I've seen how technology and education can save lives when combined with community engagement. By expanding outreach to young students and partnering with counties and schools, Maryland Vision Zero can cultivate a culture of innovation that helps achieve Vision Zero goals while inspiring the next generation of changemakers. Thank you for your leadership in making Maryland safer for pedestrians, cyclists, and drivers alike.

Thank you for giving me an opportunity to present my ideas before the Maryland Vision Zero committee.

Sincerely,
Arjun Samavedam
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