

My research project “Communication between a pedestrian and an autonomous vehicle” will enable bidirectional nonverbal communication between pedestrians and autonomous vehicles, leading to improved pedestrians' safety. This research will advance the ultimate objective of reducing traffic accidents and increasing the public acceptance of autonomous vehicles. For a one-year project aligning with this fellowship I will develop a data-driven feedback module for communicating between an autonomous vehicle and a pedestrian. I will evaluate this module by demonstrating that awareness and feedback provided by a vehicle to a pedestrian increases public acceptance and trust in autonomous vehicles in everyday life. I will create simulations which can serve as a sandbox for conducting user studies. The result of these user studies will guide the development of the feedback module, optimizing for public acceptance and trust in the autonomous vehicle's decision while being legible to the widest range of potential users. I will use this result to develop an evidence-based feedback prototype to establish a communication capability between an autonomous vehicle and a pedestrian. My academic goals and career aspirations are to research communication between an autonomous vehicle and a human being. With this project, researching at the University of Nevada, Reno will provide me with outstanding knowledge to enable and improve autonomous driving.