OSCAR Summer Impact Grant: Turning ambiguous traffic scenarios into autonomous vehicle’s intelligence

Program description

The primary goal of this multidisciplinary program is to understand driver behaviors and traffic patterns and develop a database that will become part of the design of autonomous vehicles. Video recordings from naturalistic driving will be collected and multiple video processing and data mining techniques will be utilized to analyze the driving scenarios. Of interest, scenarios that are challenging, unsafe, and ambiguous are especially important for the development of the artificial intelligence in autonomous vehicles.

By collaborating across Psychology, Computer Science, and Center for Collision Safety and Analysis, our students will learn that real-world problems are complex and require creative and multi-disciplinary solutions. They will learn complementary skills and knowledge from each discipline including the process to formulate research questions, design analytical methods, code traffic scenarios, and evaluate research outcomes. Students will work in multiple labs and engage in hands-on activities during field trips. We expect a significant increase in domain knowledge and appreciation to other disciplines at the end of this program.

Each selected student will receive a $4,000 stipend for the ten-week duration, May 28 to August 3.

Eligibility

Juniors and seniors at George Mason University. Students major in Physics, Computer Science and other Engineering disciplines, and Psychology. Minorities and women students are especially encouraged to apply.

Instructions

HireMason Job ID: 152211

In order to be considered, the following documents in pdf format need to be submitted to HireMason by March 15:

- Statement of Purpose (an essay that introduces yourself, and describes how this research experience will benefit A) your undergraduate education, and B) potential graduate education and/or career development)
- Resume
- Undergraduate transcript

For questions about this program and application process, please contact Professor Yi-Ching Lee at YLEE65@gmu.edu