



GAANN- GOSTARS Fellowship Project

Adviser: Dr. Mohammad Jalayer

Title: Identifying Distracted Driving Events using Artificial Intelligence Techniques

Description: According to National Highway Traffic Safety Administration, nationwide in 2019, distracted driving was one of the top five factors contributing to fatal motor vehicle crashes. Each year, thousands of people lose their lives in crashes resulting from distracted driving in the United States, necessitating further research and development. The primary objectives of the proposed project are to collect crash data and distracted driving event data and to identify the contributing factors, types of injuries, and injury severity related to motor vehicle traffic crashes involving distracted driving.

Impact on GAANN: This project is aligned with two focus areas of GOSTARS, including passenger safety and reduction in traffic congestion. To be specific, this project is especially important as a better knowledge of contributing factors to distracted driving crashes and incident enhance the efforts associated with prevention strategies to reduce this type of crash. This project will also highlight the benefits of the application of artificial intelligence to detect the distracted driving events on the roadways. The results also provide invaluable information for engineers, researchers, and decision makers to select the most appropriate strategies to mitigate distracted driving events in the nation.

Impact on GOSTAR: With the recent trends in advanced transportation technology and transportation bill, it is expected that demand for Transportation Engineers is increased in the next few years. As part of this project, the student will participate in the field data collection and learn more about crash data analysis using advanced statistical tool such as R and SAS and data visualization using Tableau. The student will also learn the application of artificial intelligence such as machine learning and deep learning in transportation decision making, all of which help GAANN students meet the needs of job market

Tentative Plan									
Semester	1	2	3	4	5	6	7	8	9
Task	Literature review, collect relevant data			Assess various data analysis techniques, conduct data analysis			Continue on data collection and prepare final recommendations		
Outcome	Identify research gap and state of practice and art			Crash contributing factors			Final recommendations		
Deliverable	Publish in a refereed conference proceedings and journal			Publish in a refereed conference proceedings and journal			Publish in a refereed conference proceedings and journal.		
Milestones	Dissertation committee	Qualifying exam							Graduation