

Student name: Reyshwanth Ganesan

Academic level: Master of Science, Department of Mechanical Engineering, Texas A&M University

Impact Statement:

“The project helped me develop interdisciplinary skills between electrical, mechanical and computer engineering. I was able to apply the knowledge I gained from coursework such as CSCE 633 (Machine Learning) and MEEN 651 (Control System Design). Setting up an experiment, reliably interfacing it with a data acquisition tool and using the data to derive meaningful results are some of the critical skills I was able to acquire that are sought after in the industry. These skills were the reason I was able to land an internship as a Vehicle Software Intern at Tesla. Finally, the satisfaction I gained from the research experience propelled me to pursue a PhD in Mechanical Engineering. Overall, the project exposed me to real world scenarios and practical applications of research methodologies.”

Student name: Jaikrishna Soundararajan

Academic level: Master of Science, Department of Mechanical Engineering, Texas A&M University

Impact Statement:

“I worked as a Research assistant on the project Development of a Diagnostic System for Air Brakes in Autonomous & Connected Trucks with Professor Dr. Swaroop Darbha's guidance from May 2019 to April 2020.

Developing a simulation of the air brake system provided a comprehensive understanding of modelling a complex non-linear system. This provided insights on the trade-off between accuracy and simplicity of mathematical models. It was a great opportunity to apply and enhance my understanding in the concepts I learnt in courses like "MEEN 602- Modelling and analysis of mechanical systems", "MEEN 655- Design of Nonlinear control systems" and "MEEN 651- Control systems design". This was also my first experience in using python notebooks which served as a combination of scientific writing and programming. I use this skill extensively to this day when prototyping and visualizing new algorithms. The construction of the air brakes experimental setup served as a chance to work with sensors, data acquisition system, CAD and structural analysis. This practical experience provided me the confidence to undertake testing software on autonomous cars as a part of my current profession. Overall, the project greatly added to my competency as an engineer.”