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OBJECTIVE

To acquire an internship working to develop control strategies for autonomous vehicles during the Summer of 2020

EDUCATION

UNIVERSITY OF WISCONSIN - MADISON (2018 - EXPECTED 2022)
BS MECHANICAL ENGINEERING
BS COMPUTER SCIENCES
Cumulative GPA: *3.90/4.00*

EXPERIENCE

SIMULATION-BASED ENGINEERING LABORATORY (SBEL)
Undergraduate Researcher ***May 2019 to Present***

- Worked with the open source projects ProjectChrono and the Robot Operating System (ROS) to create an autonomous scale vehicle to validate simulation accuracy
- Developed a scalable, multi-agent framework for autonomous cars built on top of ProjectChrono
- Researched and implemented reinforcement learning based control strategies for means of end-to-end control of off-road vehicles in simulated environments

WISCONSIN AUTONOMOUS
President ***September 2018 to Present***

- Developed and implemented vehicle control strategies, deep learning image recognition algorithms and an optimization based path planning/following model
- Managed group of 40 undergraduate and graduate students to compete in a variety of autonomous vehicle competitions

ENGINEERING EXPO
Industry Chair ***September 2018 to Present***

- Worked directly with Fortune 500 engineering employees by contacting and acquiring sponsors for the largest student run engineering showcase in the U.S.

INSIGHT WISCONSIN
Timing Gate ***September 2018 to May 2019***

- Programmed microcontrollers and a variety of sensors to develop a more affordable means of gathering accurate time data for UW Track and Field

Shower Head Water Usage Reducer ***December 2018 to May 2019***

- Developed a shower head that reduces water consumption and notifies user of usage
- Programmed a microcontroller and designed an electronics housing using CAD

Plant Electrical Signaling ***December 2016 to December 2018***

- Worked with a UW-Madison botany professor to develop an efficient system that can monitor electrochemical reactions in plants experiencing stressful environments

PROJECTS

AUTONOMOUS 1/6TH SCALE VEHICLE ***December 2018 to Present***

- Designed and fabricated a mounting platform for sensors and computational hardware
- Utilized and coded a microcontroller to receive and perform control instructions
- Wrote controls algorithms to pilot the vehicle through a cone course

ONE-WHEELED SKATEBOARD ***December 2017 to August 2018***

- Programmed and built a motorized electric skateboard that balanced autonomously
- Acquired $80 worth of donated parts and completed project with under $100

SKILLS

- C++, Python, Java, Matlab, C
- ROS, Linux, IoT
- SolidWorks, Fusion 360, Autodesk Inventor

- Lathe, Mill