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Aaron Young

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OBJECTIVE

To acquire an internship position at a forward thinking company developing cutting-edge technologies related to autonomous vehicles for the summer of 2020

EDUCATION

UNIVERSITY OF WISCONSIN - MADISON (2018 - EXPECTED 2022)
BS MECHANICAL ENGINEERING
BS COMPUTER SCIENCES
Cumulative GPA: *3.96/4.00*

EXPERIENCE

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

- Developed an interface between the open source physics engine ProjectChrono and Robot Operating System (ROS)
- Integrated a complete control stack to autonomously navigate a simulated vehicle and a real life 1/6th scale vehicle
- Utilized reinforcement learning to train a vehicle to drive intelligently in a simulated environment

WISCONSIN AUTONOMOUS
Autonomous Controls and Electrical Leader - *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 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 Reduction - *December 2018 to May 2019*

- Developing a shower head that reduces water consumption and notifies user of usage
- Programming a microcontroller and designing 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*

- Designed, coded and fabricated motorized electric skateboard utilizing donated parts, sensors and a microcontroller to balance autonomously

SKILLS

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