Nick Walton

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Education

BS. Candidate **Computer Science** Brigham Young University

- CGPA: **3.73 / 4.0**
- Expected Graduation Date: December 2019
- **Significant Mech. Eng. Coursework** Including: Mechatronics, System Dynamics, Elements of Electrical Engineering, Intro to Wave and Optics Physics,

Skills

Robotics: ROS, Linux, Computer Vision**,** Deep Learning, AI
Programming: C++, Python, Java, Matlab, TensorFlow
Other: Japanese**,** reading and conversationally fluent

Work Experience

Autonomous Driving System Engineering Intern, Autoliv Japan, Jun 2017 - Dec 2017

- Researched and implemented 3D computer vision methods for detecting objects with Lidar
- Analyzed CAN signals and created reports of radar object tracking accuracy
- Developed software tools for analyzing performance of radar HIL testing infrastructure

Robotics and Dynamics Research Assistant, BYU RadLab, Sep 2016 - Jun 2017

- Researched and tested accuracy of IMU's for estimating joint angles on inflatable robots
- Developed software for IMU communication and validation using Python, C++ and ROS

Project Experience

Autonomy Team Member, BYU Mars Rover, 2012-2013, 2018 - Present

- Developed a object recognition system that achieved 99% accuracy
- Designed and fabricated soil digging system that played key role in rover's success
- Won 1st in U.S. at international competition in series of complex robotics challenges

Self Driving Car Nanodegree Student, Udacity, May 2017 - Sep 2017

- Developed a traffic sign classifier using CNNs in TensorFlow
- Programmed a simulated self driving car using behavioral cloning and CNNs that was able to smoothly and safely navigate a complex environment
- Created software capable of robustly detecting lane lines in a video stream

Robot Arm Design, Personal Project, May 2016 - Present

- Analyzed torque, stress, and power requirements for 4 DOF robot arm
- Modeled components and assembly using solidworks.
- 3D printed, assembled and wired robot arm
- Created software to control robot arm on Linux using ROS and python