SHANE KELLY

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Education

Olin College of Engineering

BS, Robotics Engineering

Class of 2018, GPA: 3.76

Skills

SOFTWARE

C++
ROS
Linux
Git
Vim
Python
C
MATLAB

ELECTRICAL

Signal Processing
Analog Circuit Design
Signal Generation
Soldering

MECHANICAL

SolidWorks
Autodesk Inventor
3D Printing
Laser Cutting
Mill
Lathe
MIG Welding

Security Clearances

DoD Secret Clearance

Patents

Sealing Apparatus for Creating Moisture-Resistant Barrier Around Filaments, and Corresponding Methods
PN: US2017/0166415A1

Other Passions

Beekeeping
Table Tennis
Billiards

Experience

Rockwell Automation — Sept. 2017 - Present

Student Engineer

Working on a year-long project with four other seniors sponsored by Rockwell Automation. Designing wearable technologies to facilitate robot-human cooperation.

MITRE Corporation — May 2017 - Aug. 2017

Software Engineering Intern

Worked alongside full-time engineers doing C++ development work for a classified government project at the intersection of cyber security and embedded systems.

Amazon Robotics — Jan. 2017 - May 2017

Student Robotics Engineering Contractor

As a junior, assisted senior engineering capstone project team sponsored by Amazon Robotics. Worked on robotic computer vision applications in a warehouse environment.

Raytheon BBN Technologies — May 2016 - Aug. 2016

Sensor Systems Intern

Assisted full-time engineers with a classified government project for embedded systems with large-scale real-time constraints. Gained experience with complex C++ OOP architectures.

Pharos Labs LLC — May 2015 - Aug. 2015

Software Development Intern

Used Python to create applications for internally-facing company research centered around computer-assisted data collection/analysis.

Projects

Video Game AI — June 2017 - Present

Personal Project

Working with two other students to create a bot that plays a multiplayer capture-the-flag style browser game called TagPro. Work includes creating an intelligent state machine, efficient path planning, and human-like locomotion. Rigorously following Agile software development practices and Scrum product management.

Autonomous Robotic Environment Exploration — Jan. 2017 - May 2017

Class Project: Robotic System Integration

Equipped robot with capability to create a 2D map of its surroundings (including transparent obstacles that could not be detected by LIDAR), localize itself within a preexisting map, autonomously navigate elevators, and stitch together maps connected by an elevator "wormhole". Written in C++ and ROS.

Teach Robots to Learn Complex Tasks — Jan. 2017 - May 2017

Class Project: Computational Robotics

On a team of three students, wrote and implemented a genetic algorithm to teach a group of robots cooperative and competitive behaviors, such as forming a line or playing tag. Written in Python and ROS.

Autonomous Robot Racecar — Sept. 2016 - Dec. 2016

Class Project: Fundamentals of Robotics

Built an autonomous robot from the ground up to compete in an unmanned vehicle race. Took substantial role in all parts of the project: CAD, body fabrication, electrical design, electrical assembly, and software. Placed first out of four teams.

Analog Control of DC Motor — Sept. 2016 - Dec. 2016

Class Project: Controls

Designed and implemented electronic analog control to set position of a DC motor without any added sensors.

Interactive Wearable Vest — Sept. 2015 - Dec. 2015

Class Project: Principles of Engineering

Worked on CAD, 3D printing manufacturing, and design/implementation of the electrical system for an interactive wearable art piece, which visualizes body data of the wearer and their surroundings.