**Adam Driscoll**

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EDUCATION

**Carnegie Mellon Institute, School of Computer Science** Pittsburgh, PA

Master of Science in Robotic Systems Development December 2018

Fall 2017 Selected Coursework: Machine Learning | Manipulation, Estimation, and Control

Spring 2018 Selected Coursework: Robot Autonomy | Computer Vision | Robot Localization and Mapping

**Worcester Polytechnic Institute** Worcester, MA

Bachelor of Science in Robotics Engineering May 2012

ACADEMIC PROJECTS

**GroundsBot,** [www.groundsbot.com](http://www.groundsbot.com) Carnegie Mellon University

*Computer Vision Lead* September 2017 – May 2018

* Designing an autonomous field robot capable of mowing the rough grass at a golf course with no additional infrastructure necessary
* Fusing data from a stereo camera, RTK GPS, IMU, and encoders to create a robust perception and localization subsystems
* Implementing online machine learning algorithms to classify the different types of grass on a golf course

**Autonomous Wheelchair** Northeastern University

*Research Assistant* February – May 2017

* Programmed an autonomous wheelchair with the goal of transporting an elderly person from their nursing home to the Northeastern campus
* Researched existing SLAM algorithms to determine best algorithm for application, ultimately implementing the Cartographer system using ROS
* Integrated an IMU filter to stabilize and remove noise from IMU

**Autonomous Mapping Robot** Worcester Polytechnic Institute

*Software Developer* March – April 2011

* Developed mobile robot to autonomously map and navigate a small hallway with static obstacle avoidance
* Utilized a combination of ultrasonic sensors and encoders to localize, perceive, and map environment

PROFESSIONAL EXPERIENCE

**Amazon Robotics** North Reading, MA

*Operational Stability Engineer*July 2015 – February 2017

* Developed over 20 automation tools to replace manual task execution and reduce system failures
* Led more than 100 high severity calls with general and regional directors to resolve critical software issues
* Provided technical guidance to 120 zones across 36 Amazon Fulfilment centers to identify and resolve operational challenges
* Analyzed over 200 complex software issues to identify root causes

*Project: Support Scripts Package*

* Managed a suite of Bash scripts designed to automate common support tasks to increase efficiency
* Developed new features and scripts to optimize and build upon current features
* Collaborated with development teams to identify bugs and implement new features

*Project: Pod Crash Investigation*

* Investigated and troubleshot numerous reports of drive units (robots) crashing into each other to determine root cause using MySQL and various internally developed tools
* Communicated with operational teams to reinforce proper training to prevent further crashes
* Identified major bug in the robot movement software and collaborated with development team to resolve it

*Field Service Engineer*February 2013 – July 2015

* Promoted optimal hardware functionality by providing clients with on-site and remote technical services
* Troubleshot errors on all hardware components of the Amazon Robotics solution using a combination of MySQL queries and internally developed hardware testing tools
* Analyzed common hardware errors across all clients and developed new procedures to correct and minimize these errors

*Project: Commercial Client Health Dashboard*

* Created a set of MySQL queries to collect data from 29 commercial client facilities
* Aggregated and presented this data in a user friendly, graphical format using internally developed tools to allow maintenance teams to efficiently analyze warehouse status
* Trained a replacement to use these tools and build upon the dashboard created prior to team transition

SKILLS

**Programming Languages:** Python, C++, Bash, MySQL, Java, C

**Frameworks and Operating Systems:** Linux (Ubuntu, Red Hat), ROS, Git