

Adam Driscoll

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EDUCATION

Carnegie Mellon Institute, School of Computer Science

Master of Science in Robotic Systems Development

Pittsburgh, PA

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

Bachelor of Science in Robotics Engineering

Worcester, MA

May 2012

ACADEMIC PROJECTS

GroundsBot, 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 troubleshooted 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
- Troubleshooted 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