

EDUCATION

CARNEGIE MELLON UNIVERSITY MS IN ROBOTIC SYSTEMS DEVELOPMENT

Expected 12.2018 | Pittsburgh, PA
GPA: 4.0

COURSEWORK:

Current:

Deep Learning
Geometry-Based Methods in Vision
Computer Graphics

Completed:

Computer Vision
Localization and Mapping
Machine Learning
Manipulation, Estimation & Control

WORCESTER POLYTECHNIC INSTITUTE BS IN ROBOTICS ENGINEERING

05.2012 | Worcester, MA

LINKS

[Github://jdriscoll319](#)
[LinkedIn://adam-driscoll](#)

SKILLS

PROGRAMMING

Languages:

C++ | Python | MATLAB | LATEX

Frameworks, Tools & Libraries:

Git | ROS | Gazebo | NumPy
PyTorch | MySQL

Operating Systems:

Ubuntu | Windows

ACADEMIC PROJECTS

GROUNDSBOT | CAPSTONE PROJECT

09.2017 – 05.2018 | CMU | [groundsbots.com](#)

- Designed an autonomous field robot capable of mowing the rough grass at a golf course
- Created perception & localization subsystems by fusing data from Lidar, RTK GPS, IMU & encoders using ROS & C++
- Created GPS waypoint following & control algorithms used in the navigation subsystem of GroundsBot
- Achieved 98.6% coverage of input area, avoidance of 4/5 static obstacles & detection of 22/25 dynamic obstacles

MULTI-ROBOT SAM | SLAM COURSE PROJECT

02.2018 – 05.2018 | CMU

- Used the GroundsBot platform in two connected hallways to achieve multi-robot Smoothing and Mapping
- Generated prior by implementing RANSAC algorithm over AprilTag landmark correspondences
- Created unified global map with 98.2% accuracy by employing bundle adjustments to merge datasets

COMPUTER VISION

02.2018 – 05.2018 | CMU | [Assignments in MATLAB](#)

- Precise optical character recognition accomplished by building neural network using the sigmoid & softmax activation functions with cross-entropy loss
- Accurate template tracking achieved through implementation of the Lucas-Kanade tracking algorithm
- Performed 3D reconstruction using the 7-point algorithm, epipolar geometry & bundle adjustment

PROFESSIONAL EXPERIENCE

DISCOVERY ROBOTICS | SOFTWARE INTERN

05.2018 – 08.2018 | Pittsburgh, PA

- Built simulation environment in Gazebo to enable rapid iteration on software algorithms
- Modeled flagship robot in simulation including accurate physics, motion model & sensor representation

AMAZON ROBOTICS

OPERATIONAL STABILITY ENGINEER | FIELD SERVICE ENGINEER

02.2013 – 02.2017 | North Reading, MA

- Developed over 20 automation tools to replace manual task execution & reduce system failures
- Analyzed over 200 complex software issues & identified their root causes
- Collaborated with development teams to identify bugs & implement new features
- Troubleshoot errors on all hardware components of the Amazon Robotics solution using MySQL queries & internally developed hardware testing tools
- Created MySQL queries to collect data from 29 client facilities & presented this data in a UI using internally developed tools, allowing maintenance teams to efficiently analyze warehouse status