Eyassu Shimelis

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Cambridge, MA

EDUCATION

Harvey Mudd College Aug 2014 - May 2018
B.S. in Engineering, Departmental Honors *Claremont, CA*
Relevant Coursework: Autonomous Robot Navigation, Artificial Intelligence, Communications & Information Theory, Data Structures and Program Development, Microprocessor Systems, Advanced Systems Engineering, Multi-variable Calculus, Differential Equations, and Linear Algebra

Massachusetts Institute of Technology Feb 2020 - Present
Advanced Studies Program *Cambridge, MA*
Graduate Coursework: 16.32 - Principles of Optimal Control & Estimation (Spring '20)

WORK EXPERIENCE

MIT Lincoln Laboratory May 2018 - Present
Assistant Technical Staff, Advanced Concepts and Technologies Group *Lexington, MA*
- Developing algorithms for distributed inference on low-cost sensors and computing devices

RESEARCH & PROJECTS

Lab for Autonomous and Intelligent Robotics (LAIR) Sep 2017 - May 2018
Undergraduate Research Assistant *Claremont, CA*
- Developed methods to autonomously tracks sharks with multiple autonomous underwater vehicles (AUVs)
- Simulated and tested control-based trackers in MATLAB, later re-written in C#, and implemented in hardware
- Wrote an AUV simulation library in MATLAB to test graph-based planning methods for multi-agent coordination
- Designed (CAD) and machined waterproof housings for external hydrophone amplification boards

Systron Donner Inertial Aug 2017 - May 2018
Senior Capstone Project *Claremont, CA*
- Developed a compensation method for highly nonlinear IMU errors using neural network regression
- Validated approach to existing method and presented results in two presentations and a written report

Autonomous Robot Navigation (ENGR160) Jan 2018 - May 2018
HMC Senior-level Robotics Course *Claremont, CA*
- Implemented control, sensing, estimation, localization, and mapping algorithms on a mobile robotic system
- Simulated, tested, and deployed an online particle filter (PF) for localization
- Implemented an Unscented Kalman Filter (UKF) and compared its performance to a PF

LEADERSHIP & TEACHING EXPERIENCE

MIT Course 16.633 Aug 2019 - Dec 2019
Co-instructor, Autonomous Machines Seminar *Cambridge, MA*
- Instructed a 20-person junior robotics course, led by Professors Sertac Karaman and Jonathan How (AeroAstro)
- Developed and taught weekly lectures & labs focused on end-to-end imitation learning for autonomous vehicles

MIT Beaver Works Mar 2019 - Present
RACECAR Course Instructor & Outreach Coordinator *Cambridge, MA*
- Lead a four-week summer course for 50+ high school students interested in self-driving cars
- Develop lectures and labs for the MIT RACECAR platform–a research-grade, 1/10th scale autonomous vehicle
- Organize and teach various weekend courses throughout the year for local, underrepresented students

SKILLS

Programming: Python, Julia, MATLAB, C/C#/C++, Java, Verilog, HTML/CSS, Javascript
Technical: Linux, Git, CAD, ROS, LaTeX, Machining, 3D Printing, FPGA
Recreational Activities: Running, Sailing, Photography, Rock Climbing, Cooking

LINKS

Website: **eyassu.com** | LinkedIn: **eshimelis** | Undergraduate Research: **LAIR Homepage**

Updated on May 18, 2021