Eyassu Shimelis

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EDUCATION

HARVEY MUDD COLLEGE
Bachelor of Science, Engineering
May 2018 | Claremont, CA

RELEVANT COURSEWORK

Autonomous Robot Navigation
Artificial Intelligence
Communication and Info. Theory
Data Structures and Program Dev.
Microprocessor Sys: Design & App.
Advanced Systems Engineering
Elec. & Mag. Circuits
Digital Elec. and Comp. Engineering
Eng. Design and Manufacturing
Materials Engineering
Multivariable Calculus
Differential Eqns. and Lin. Al.

SKILLS

LANGUAGES
Python • MATLAB • C\C#\C++ • Java • SystemVerilog • Arduino • Javascript • HTML/CSS • Racket • LabView • Prolog

TECHNICAL
Sensor Fusion (Kalman Filtering) • Artificial Neural Networks • Reinforcement Learning • Classification • Github • SolidWorks • LaTeX • Machining • CAD • 3D Printing • PCB Design • FPGA

AWARDS & HONORS

2018	Eng. Departmental Honors
2016-18	Laspa Fellow (Auto. Sys.)
2017	Ford Men of Courage Fund
2016	HMC Davies Eng. Prize

LINKS

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

SOCIETIES

2012-14	National Honor Society
2010-14	French Honor Society

RECREATIONAL ACTIVITIES

Running • Photography • Rock Climbing

RESEARCH

MIT LINCOLN LABORATORY | Summer Research Program Intern

Start Date: May 2018 | Lexington, MA | Dr. Bryan Teague
Upcoming research in cooperative network localization and navigation

LAIR | Lab for Autonomous and Intelligent Robotics

Sep 2016 – May 2018 | Claremont, CA | Dr. Christopher Clark
Multi-AUV Stochastic Modeling and Control for Shark Tracking

- Simulated multiple control-based trackers in MATLAB, later implemented in C#
- Analyzed multiple graph-based multi-AUV planning methods in MATLAB
- Designed waterproof housings for external hydrophone amplification boards

PROJECT EXPERIENCE

AUTONOMOUS ROBOT NAVIGATION | ENG160

Jan 2018 – May 2018 | Claremont, CA
Technical elective course in autonomous robotics

- Characterized odometry and developed a point tracking controller
- Designed and implemented an online particle filter
- Final Project: Localized using an online Unscented Kalman Filter (UKF)

SYSTRON DONNER INERTIAL | Clinic Project

Aug 2017 – May 2018 | Claremont, CA | Dr. Anthony Bright
Embedded Neural Networks for Improved Inertial Sensor Calibration

- Ported SDI calibration algorithms into MATLAB
- Researched data mining techniques for sensor calibration and error compensation, due to highly nonlinear effects
- Identified candidate variables and implemented an Artificial Neural Network for further error compensation

AMAZON LAB126 | Clinic Project

Jan 2017 – May 2017 | Claremont, CA | Dr. Timothy Tsai
Configurable Microphone Array Harness

- Developed a high-channel, high-bandwidth audio harness for automated testing of Alexa devices
- Wrote a scriptable Python audio library to handle up to 32 channels of audio throughput

EXTRACURRICULAR ACTIVITIES

ACADEMIC EXCELLENCE TUTOR | Engineering AE

Aug 2016 – May 2017 | Claremont, CA

- Hold exam reviews and weekly tutoring sessions for a course of 240 students
- Work closely with Professors to provide student feedback on course materials

2017-Pres.	Peer Academic Liason	Academic assistance to first year students
2016-Pres.	MuddHacks Organizer	Harvey Mudd hardware hackathon
2016-17	South Dorm Mentor	HMC Dean of Student Affairs, Asst. RA
2014-17	Homework Hotline Mentor	Free, over-the-phone tutoring
2014-17	VP of Science Bus	Science lessons for local elementary students
2015	HMC Combat Robotics	Drive-train team
2014-15	Mudd Investment Fund	Finance/Investment Club