

EDUCATION

Massachusetts Institute of Technology

Cambridge, MA

Ph.D. in Mechanical Engineering (Robotics); Minor: Computer Science GPA: -/5.0

Sep. 2018 – present

- **Awards:** National Defense Science and Engineering Graduate (NDSEG) Fellowship

M.S. in Mechanical Engineering (Robotics); GPA: 4.7/5.0

Feb. 2016 – Sep. 2018

- **Courses:** Autonomy & Decision Making, Autonomous Vehicles, Estimation & Learning, Information Theory
- **Thesis:** Decentralized Task Allocation for Dynamic, Time-Sensitive Tasks

B.S. in Mathematics and Mechanical Engineering, Minor: Economics; GPA: 4.8/5.0

Aug. 2012 – Feb. 2016

- **Courses:** Algorithms, Computation Structures, Discrete Applied Math, Nonlinear Dynamics, Product Design,
- **Honors:** Tau Beta Pi Engineering Honor Society, Pi Tau Sigma Mechanical Engineering Honor Society

EXPERIENCE

Aurora Flight Sciences

Cambridge, MA

Autonomy Intern

Summer 2018

- **Multivehicle Autonomous Coordination:** Developed and implemented planning algorithms for coordinating future network of air taxis in C++

MIT Laboratory for Information & Decision Systems

Cambridge, MA

Graduate Research Assistant, Adviser: Prof. Jonathan How

Sep 2016 - June 2018

- **Wireless Broadcasting for Robot Teams:** Studied effects of mesh communication on team-wide consensus using Raspberry Pi's (Presented at RSS 2018: Real Communication in Wild Workshop)
- **Decentralized Dynamic Task Allocation:** Created decentralized algorithm-CBBA with Partial Replanning- that can allocate tasks online with provable convergence. Convergence and optimality tested on homemade Python simulator and Raspberry Pi's. (Accepted at AAAI Guidance, Navigation & Control, Jan. 2019)

Woobo, Inc.

Cambridge, MA

Hardware/Robotics Intern

Summer 2016

- **Mechatronic Design:** Lead on electronics for interactive robotic companion, created custom circuits for I/O of the robot and mechanical actuation
- **Electronics Software Integration:** Developed Java library to control multiple sensors, LEDs, and motors to communicate with Android app backbone using IOIO microcontroller

MIT Department of Mechanical Engineering

Teaching Assistant

Feb. 2013 - July 2016

- **Graduate Residential TA:** Held weekly office hours, prepared homework problems and quizzes on MITx (60 students)
- **2.01x QA Team Manager, Discussion Moderator, Content Editor:** Managed team of undergraduate Quality Assurance team (3 MIT students) for online EdX course; Edited course material and moderated online discussion forums

MIT Department of Mechanical Engineering

Undergraduate Research Assistant, Adviser: Prof. Dick Yue

June 2014 - May 2015

- **Autonomous Buoys for Persistent Surveillance:** Designed, tested, and built buoy exterior design to minimize energy consumption, and implemented GPS sensor suite and motor controls with Arduino Mega. Created Python GUI for multi-robot monitoring and communication with XBee modules for effective real-time deployment

TECHNICAL SKILLS

Software: C ++ (fluent), Python (fluent), Java (proficient), MATLAB (proficient), Linux, ROS, Git, LaTeX

Mechanical: SolidWorks, Arduino, Raspberry Pi, Electronics/Circuits, CFD, Machine Trained

SERVICE AND LEADERSHIP

MIT OpenCourseWare Faculty Advisory Committee: Graduate, Undergraduate Member

June 2015-present

MIT Presidential Committee on Future of OCW: Member

June 2016- Dec 2016

MIT Graduate Hillel: Treasurer

Nov 2016-present