Noam Buckman

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Education

Massachusetts Institute of Technology — Cambridge, MA
M.S. in Mechanical Engineering; GPA: 4.7/5.0 — *Feb. 2016 – Present*

- **Courses**: Autonomy & Decision Making, Information Theory, Autonomous Vehicles, Estimation & Learning, Feedback Control Systems, Dynamics
- **Awards**: National Defense Science and Engineering Graduate (NDSEG) Fellowship: 4 years, $350,000

Massachusetts Institute of Technology — Cambridge, MA
B.S. in Mechanical Engineering, Mathematics; GPA: 4.8/5.0 — *Aug. 2012 – Feb. 2016*

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

Technical Skills

Software: Python, C++, Java, ROS, Git, MATLAB, R, Web Development (HTML/CSS, PHP)
Mechanical Design/Engineering:: SolidWorks, Arduino, Raspberry Pi, Electronics/Circuits, CFD, Machine Trained (Mill, Lathe, 3D Printing, Laser Cutter)

Experience

MIT Aerospace Controls Lab / Lab. for Information & Decision Systems — Cambridge, MA
Graduate Research Assistant, Adviser: Prof. Jonathan How — *Sep 2016 - Present*

- **Wireless Broadcasting for Robot Teams**: Experimentation with Raspberry Pi nodes to categorize communication limitations and strategies for distributed robot teams; researching inter-vehicle cooperation for high-speed consensus and task allocation
- **Time-Sensitive Task Allocation**: Developing distributed task allocation algorithm for AUV's servicing dynamic and time-sensitive tasks based on Consensus Based Bundle Algorithm (CBBA)

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 library to control multiple sensors, LEDs, and motors to communicate with Android app backbone using IOIO microcontroller

2.001/2.01: Mechanics and Materials I
Graduate Teaching Assistant — *Feb. 2016 - July 2016*

- **Graduate Residential TA**: Held weekly office hours, prepared homework problems and quizzes on MITx (60 students)

MIT Experimental Hydrodynamics Lab
Undergraduate Research Assistant, Adviser: Prof. Alex Techet — *June 2015 - Dec 2015*

- **Fish Impulse Model**: Examined impulse model using OpenFoam CFD software, results presented at APS Division of Fluid Dynamics Conference
- **Computational Fluid Dynamics Simulations**: Learned and wrote guide to OpenFoam, created synthetic datasets that can be used to validate experimental methods

MIT Vortical Flow Lab
Undergraduate Research Assistant, Adviser: Prof. Dick Yue — *June 2014 - May 2015*

- **Mechanical Design & Controls of Autonomous Buoy**: Designed, tested, and built buoy exterior design to minimize energy consumption, and implemented GPS sensor suite and motor controls with Adruino Mega
- **Multi-robot Offboard Control and Communication**: Developed Python GUI for multi-robot monitoring and communication with XBee modules for effective real-time deployment

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