# EDUCATION

## Massachusetts Institute of Technology (MIT) Cambridge, MA

## Candidate for M.Eng. in Electrical Engineering and Computer Science, GPA: 5.0/5.0 June 2019

## S.B. in Electrical Engineering and Computer Science, GPA: 4.9/5.0 June 2018

*Relevant Coursework*: Statistical Learning Theory and Applications, Robotics: Science and Systems, Bayesian Modeling and Inference, Machine Learning, Inference and Information, Design and Analysis of Algorithms, Computational Cognitive Science, Discrete-Time Signal Processing, Elements of Software Construction, Computation Structures

# EXPERIENCE

**Massachusetts Institute of Technology Cambridge, MA**

*M.Eng. Researcher*March 2018 – present

* Conducting research as a member of the DRL (Distributed Robotics Laboratory) group at CSAIL (Computer Science and Artificial Intelligence Laboratory)
* Developing learning algorithms for LIDAR-based rural road detection and intersection topology inference
* Developing rural environment simulation platform based on CARLA open-source driving simulator

**Autoliv Lowell, MA**

*Intern, Advanced Sensing Group*June – August 2017

* Developed mapping algorithm for Lidar data (Velodyne VLP-64) using point cloud registration to maintain coherent point cloud history and advance lane/object tracking algorithms
* Investigated mapping/registration techniques with lower-resolution (Velodyne VLP-32) Lidar data to improve point cloud data resolution
* Investigated ego-motion estimation techniques with VLP-64 data to support vehicle localization

**Massachusetts Institute of Technology Cambridge, MA**

*SuperUROP Advanced Undergraduate Research Program*September 2016 – May 2017

* Conducted research as member of the SLS (Spoken Language Systems) group at CSAIL (Computer Science and Artificial Intelligence Laboratory)
* Contributed to the development of a conversational robotic system that can acknowledge speaking subjects
* Converted offline Voice Activity Detector module into real-time streaming module
* Researched techniques for integrating visual face detection and audio source localization

**Northrop Grumman San Diego, CA**

*Intern, Systems Integration, Test & Evaluation*June – August 2016

* Supported Systems Integration, Test & Evaluation for the Triton UAV (Unmanned Aerial Vehicle) program
* Developed Python test automation script for Triton test-bench landing test
* Co-developed SQL database for automated processing of Triton System Test Requests
* Improved upon Excel database for tracking flight requirements and test points
* Researched test automation methods for future modular hot-bench

**PROJECTS**

## MIT Unmanned Aerial Vehicle Team Cambridge, MA

## *Student Participant* September 2014 – September 2017

* Developed refined 2D simulator of competition arena and agent dynamics for the International Aerial Robotics Competition as simulation team lead
* Managed development of computer vision gridline and circle detection Python programs as computer vision team lead
* Co-developed Python simulator of competition arena and contributed to UAV path planning algorithms as member of artificial intelligence team

# SKILLS

**Programming languages**: Python, C++, Java, C, MATLAB, C#, Mathematica

**Other software:** Microsoft SQL Server, Microsoft Excel (VBA)