

# Aayush Gupta

410 Memorial Drive: 432D, Cambridge, MA 02139

## EDUCATION



**MIT**

Class of 2021, 5.0 GPA  
Computer Science Major



**Saratoga High School**

Class of 2018  
High Honors

## WORK EXPERIENCE

### Scale AI Intern (2019)

Used Node.js, React, MongoDB, SQL to implement consensus for 2D classification  
Altered incentive structures to increase accuracy of LIDAR classification  
Using Google Cloud Engine to train a model for prelabeling lidar cuboid extrapolation (in progress)

### Securiti.ai Winter Intern (2019)

Built custom convolutional neural networks with Google Colab and Pytorch

### Auto-LaTeX Equations Founder (2015-19)

**Over 100,000 weekly users , 4.0+ star rating.**

Coded and branded own Google Docs add-on for LaTeX equations  
Marketed to professors and admins with cold emails to adopt for education

### Neuralpets.io Developer at Hack Lodge (2019)

Led team of 5 to build webapp on React and Node.js to gamify training unlabeled data through public cookie clicker type AI-based classification

### Founder/President of Saratoga High IoT Club (2016-18)

Attained \$5000 funding from Micron foundation by cold emails  
Taught with Arduinos to engage kids in laser tag, game bots, theremins

### Taught A-Star USA Computing Olympiad Camp (2017)

Managed classroom of ~20 A-Star USACO Silver students  
Built in-home grading system for adversarial bots on final

## CONFERENCE PAPERS

### A Decision-theoretic Approach to Detection-based Target Search with a Drone (2017)

**Accepted** at 2017 IEEE/RSJ International Conf. on Intelligent Robots and Systems (IROS)  
Used Julia, SARSOP, and Python with reinforcement learning with partially observable Markov decision processes to find targets 3.3x faster than heuristics. Led team with Daniel Bessonov and Patrick Li to divide tasks.

### Dynamic Pricing via Reinforcement Learning for Multi-Objective Ridesharing Optimization (2017)

**Accepted** to BayLearn 2017  
Used Julia, SARSOP, and Python with reinforcement learning to produce a Pareto curve to reduce passenger wait time while increasing company profit.

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[linkedin.com/in/aayushgupta0](https://linkedin.com/in/aayushgupta0)

## AWARDS

### USA Computing Olympiad National Camp Finalist (2016)

Chosen as top 28 pre-collegiate competitive programmers to compete for spot on USA team.  
Mastered algorithms such as dynamic programming, recursion, shortest path, and binary trees with C++.

### Putnam Top 500 Math Undergrads (2018)

### USA Junior Math Olympiad Qualifier (2016)

Selected as top 200 out of over 70,000 precollegiate students to compete for spot at national camp.

### USA Physics Olympiad Silver Medal (2017)

Recognized as top 150 precollegiate physics students in the USA.

### North American Computational Linguistics Olympiad Finalist (2016)

Recognized as top 50 in USA to compete for national team.

## PROJECTS

### Synthesizing CT images from MRI images with Generative Adversarial Networks (GANs) (2017)

Used cycle consistent adversarial neural networks to create CT images from MRIs with state of the art accuracy.

*1st Place 2018 Synopsys Science Fair*

## SKILLS

C++, Python, Java, JavaScript, React.js, Node.js, PyTorch, Firebase, MondoDB, SQL

Data Science, Math, Research, Algorithms, Neural Networks

## MIT EECS COURSEWORK

6.004 [Computation Structures](#)

6.036 [Machine Learning](#)

6.046 [Advanced Algorithms](#)

6.041 [Probability](#)

6.890 Deep Learning for Algorithms

6.03 EECS for Medical Devices