Aayush Gupta

410 Memorial Drive: 432D, Cambridge, MA 02139

aayushg@mit.edu
408 621 8354
aayushg.com
github.com/Divide-By-0
linkedin.com/in/aayushgupta0

EDUCATION

MIT
Class of 2021
Computer Science Major

Saratoga High School
Class of 2018
High Honors

WORK EXPERIENCE

Stealth Mode Startup Winter Intern (2019)

Used Google Colab and Pytorch to build a convolutional neural network in collaboration with other researchers and interns

Auto-LaTeX Equations Founder (2015-2019)

Over 100,000 weekly users , 4.0+ star rating.
Coded, branded, and marketed my own Google Docs add-on to offer LaTeX equations in Google Docs
Cold emailed professors and admins to adopt for education

Neuralpets.io Developer at Hack Lodge (2019)

Led team of 5 to use React and Node.js for a website to gamify training unlabeled data while teaching basics of AI-based classification

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

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

Taught A-Star USA Computing Olympiad Camp (2017)

Managed classroom to teach students at A-Star USACO Silver
Programmed 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 the target 3.3 times faster than a heuristic policy.
Led team with Daniel Bessonov and Patrick Li to efficiently 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.

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 like 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.

Best Math Club Teacher (2016)
Won student vote. Led classroom, created curriculum and calendar.

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

Data Science, Math, Research, Algorithms, Neural Networks

MIT COURSEWORK

6.004 Computation Structures
6.036 Intro to Machine Learning
6.046 Advanced Algorithms