Abhijit Gupta

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Education

Yale University **New Haven, CT**

BS. Computer Science, BS. Applied Mathematics *Expected May 2023*

- Relevant Coursework: Data Structures, Vector Calculus and Linear Algebra, Discrete Mathematics
- Activities: Yale Computer Society, YHack Organizing Committee, Yale Undergraduate Aerospace Association

North Carolina School of Science and Mathematics **Durham, NC**

High School Diploma *August 2017 - May 2019*

- Relevant Coursework: Multivariable Calculus; Numerical Analysis; C, Java, Python Programming
- Activities: FIRST Robotics Competition, NCSSM Computer Science Club, NCSSM Math Club

Experience

Yale University **New Haven, CT**

Undergraduate Researcher | Interactive Machines Group *January 2019 - Present*

- Developing a machine learning pipeline studying social group phenomena in the context of human-robot interaction (HRI) using face-formations; to be implemented on the Yale Interactive Machines Group Shutter Robot. Using Python, TensorFlow, and ROS

Yale University **New Haven, CT**

Undergraduate Researcher | Computer Science Department *August 2019 - December 2019*

- Developed machine learning models classifying salient events in physics simulations as part of a larger project studying implicit physical reasoning in the Facebook AI PHYRE Project; collaborating with Dr. Radev, the LILY Lab, and Salesforce Research.

FIRST Robotics Competition **Cary, NC**

Team Captain | FRC 5511 Cortechs Robotics *August 2015 - July 2019*

- Led team of forty members, handled budget of over $50,000, built and programmed 100+ pound robots, competed locally and internationally in the FIRST Robotics Competition, spread STEM education to underserved communities
- Quality Award at the Houston World Championships in 2017, Ranked 3rd of 70 in NC in 2019

University of North Carolina, Chapel Hill **Chapel Hill, NC**

High School Researcher | Physics Department *November 2017 - May 2019*

- Analyzed the Effects of Relativity on the Quadrupole Oscillation of Compact Objects using computational methods (Python) under the mentorship of Mr. Reece Boston, Dr. Charles Evans, and Dr. Jonathan Bennett

Projects

Statbotics.io *July, 2019 - Present*

- Developing an open-source data analytics platform with Python, Django, MySQL, React, NodeJS, and Google Cloud to analyze time-series localization data from the FIRST Robotics Competition using Zebra MotionWorks Ultra Wideband sensors

Project Horus *September, 2019*

- Developed a receipt scanning application using OCR (AWS Textract) and NLP (Python) to incentivize positive spending habits.
- Won the 2019 HackMIT Financial Technology Track, Instabase Sponsor Award

Skills

- **Languages**: Python (NumPy, Pandas, TensorFlow, Django), Java, C/C++, MySQL, HTML/CSS/JS, Matlab, R, ROS
- **Technologies**: Unix/Linux, Git, Amazon Web Services, Google Cloud Platform, RESTful API

Honors & Awards

- **Regeneron STS Scholar** - for novel high school astrophysics research and overall achievement *January, 2019*
- **Modeling the Future Challenge Winner -** for mathematical modeling paper on autonomous vehicles *April, 2018*
- **FIRST Dean's List Finalist Award** - for outstanding leadership and commitment to FIRST Robotics *April, 2018*