Vivek **Mhatre**

Software Developer · Student

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Education

Georgia Institute of Technology   *Atlanta, Georgia*
Computer Science Major, Expected May 2022   *August. 2019 - Present*
- Specializing in Systems & Architecture and Intelligence · GPA: 3.88

Experience

Georgia Tech Research Institute   *Atlanta, Georgia*
Research Intern   *May 2020 - July 2020*
- Researched and developed various custom machine learning models using Keras to accurately characterize blast waves generated by explosive charges.
- Parsed, organized, and prepared historically collected datasets using Pandas and Numpy.
- Utilized various signal processing methods to extract important features from sensor data.

Rutgers University   *New Brunswick, New Jersey*
Research Assistant   *May 2019 - August 2019*
- Responsible for development of a new database entry system to track ongoing experiments.
- Conducted research in the Hybrid Micro/Nanomanufacturing Laboratory developing ionic thrusters for propulsion systems of small satellites.
- Investigated fabrication for wafer-scale arrays of hierarchical micro/nanostructures through the use of photolithography.

MobileArq   *Summit, New Jersey*
Database Programmer   *Oct. 2014 - Sept. 2018*
- Maintained highly secure databases for large school districts consisting of 40,000 families.
- Created and maintained secure websites for various organizations including the Summit Tennis Club through LAMP Stack and Word-Press.
- Designed mockups and wireframes for a mobile application to assess Otolaryngology residents at Columbia University.

Extracurricular Activities

Cybersecurity
Coding
- Part of the Georgia Tech cybersecurity club, the Greyhat Club. As part of a semester long project, I created a basic aimbot in Counter-Strike: Global Offensive using C and x86 Assembly.
- Won the Equifax CTF challenge at HackGT 2019 with the Greyhat team. Competed in PicoCTF hosted by Carnegie Mellon University.
- Hands-on security projects for mitigating against SQL injection, cross site scripting, and ensuring least privilege access as part of Greyhat.

Data Analytics
Projects
- Created a Fantasy Premier League tool to accurately predict player performances using the scikit-learn machine learning library in Python.
- Used R to model simple linear regression, multiple linear regression, ANOVA, MANOVA, and time series.
- Modeled local weather data using Python to view differences in weather patterns in the past decade.

Hackathons
Clubs and Coding
- Created a voice assistant to recognize toxic language and depression using machine learning in the HackNYU 2018 hackathon.
- Too Long Didn't Listen (TL:DL): Created a tool during HackGT 2019 to convert an mp3 file into a summarized version of the audio, highlighting keywords and linking selected phrases.
- Programmed with Drupal open source libraries, and collaborated with developers around the world during Google Code-in project.
- Robojackets Intelligent Ground Vehicle Competition: programmed an autonomous robot capable of navigating an off-road obstacle course in varying weather and lighting conditions using advanced intelligence algorithms.
- Experience building and flying autonomous planes and drones using open autopilot software: https://bit.ly/2lxEIyN

Skills

Software	AutoCAD, OnShape, Solidworks, Fusion 360
Programming Languages	Python, R, Java, Javascript, MATLAB, LaTeX