

# 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 2019 - July 2019

- 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 WordPress.
- 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/2lxElYn>

## Skills

**Software** AutoCAD, OnShape, Solidworks, Fusion 360

**Programming Languages** Python, R, Java, Javascript, MATLAB, LaTeX