

# Benjamin Variano

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## EDUCATION

### City College of New York

Bachelor of Engineering in Computer Engineering

New York, NY  
December 2020

**Relevant Courses:** Data Structures, Algorithms, Computer Organization and Architecture, Operating Systems, Numerical and Scientific Programming

## SKILLS

**Programming Languages:** Java, Python, C++, JavaScript (familiar), HTML/CSS (familiar), Solidity

**Proficiencies:** Git, Vert.x, GraphQL, Jenkins, CI/CD, ELF, Splunk, HummingBird, TailwindCSS, React, Postman, Insomnia, API handling, Bootstrap, DroneKit, ArduPilot, Agora, Bash, VHDL, Agile methodology, Vim

## WORK EXPERIENCE

### Software Engineer III at American Express | *Software Engineer*

January 2021 – Present

- Contribute to the Enterprise Communications Platform powering Customer Communications Fulfillment and Management for Email, SMS, Push and paper letter communications for Credit Outbound Team
- Expanded upon Adaptive Delivery Engine core component, an omnichannel core component of our platform that handles the overall dispatch and delivery of outbound messages, dynamically choosing the right message, channel and time to deliver based upon the given market locale and customer preferences
- Developed and implemented the opt out journey for SMS messages on new RAVEN platform allowing customers to opt out of SMS communications by replying to the message

### US Army Grant at RFCUNY | *Software Engineer Intern*

May 2020 – January 2021

- Developed an autonomous drone swarm using **C++**, **Python**, and **DroneKit** by implementing game theory and genetic algorithms for military application in an **Agile** team of 5
- Communicated with on-board flight controllers using **DroneKit API** and **MAVlink** protocols to make real-time decisions for flight maneuvers based on environment and mission
- Passed environmental data from **Python** code to **C++** executable using **Pipe** functions for bi-directional communication

### IT Technician at City College of New York | *College Assistant*

November 2018 – December 2020

- Installed and maintained Operating Systems and software on Server and Host devices.
- Fixed networking issues pertaining to Cisco and D-Link switches and set up Static IPs for host devices.
- Managed ticket system and quickly resolved user issues using remote-assistant software

### Cybersecurity Research at RFCUNY | *Research Assistant*

July 2018 – December 2018

- Established a secure communication link using **Agora.io API** that was embedded into a webpage for Doctor-patient interfacing
- Implemented encryption and token handling by integrating and customizing the **Agora.io API** into our **JavaScript** code to create a safe and reliable platform for communication

## PROJECTS

### AI Controlled Drone (rolled over into research with US Army listed above)

Spring 2020

- Created a drone capable of flying missions autonomously using **Python** and **C++** without active user input
- Interpreted input data from environment using **Python** and **C++** to make real-time decisions and communicate with flight controller next course of action
- Wrote scripts for simulation environment using **Bash** to increase simulation setup speed

### Single Cycle CPU | [GitHub](#) | [Demo](#)

Fall 2019

- Used **Quartus** and an **FPGA DE2** board to create a single cycle CPU in **VHDL**
- CPU could perform all Bitwise operations as well as logical shift and rotate, allowing for both signed and unsigned addition, subtraction and multiplication and division by values of 2

## LEADERSHIP

### Student Athlete at City College of New York | *Lacrosse Team Captain*

Fall 2016 – Spring 2020

- Led a team of 25 peers through four seasons of MCLA lacrosse as team captain
- Spent 2 years as Player-Coach organizing daily practices and game schedule and acting as liaison between our team and the athletic department
- Mentored younger players both on and off the field throughout the academic year
- Arranged volunteer work for the team to give back to the local community