

JAKE ZAIA

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EXPERIENCE

Software Engineer

Herrick Technology Laboratories

May 2020 – Present

Germantown, MD / Online

- Writes front facing REST API endpoints in Go that communicate with a C++ backend through protobuf
- Wrote firmware to interface with various sensors over UART and I²C
- Programmed FreeRTOS systems on a Nios II soft core
- Implemented backend functionality for transmitting via the redhawk software defined radio framework
- Wrote backend software supporting direction finding capabilities of a software defined radio

Computer Science Tutor

Wyzant Inc.

May 2019 – December 2020

Online

- Taught various math and computer science topics to high school, college-age, and adult students
- Managed a schedule of clients located across multiple time zones

Summer Intern for Mainframe Security

Morgan Stanley

July 2018 – August 2018

New York, NY

- Implemented an internal website to resolve mainframe issues
- Created a front end interface and worked to maintain a good user experience for end users
- Communicated with bots running on RACF and TSS mainframes to query basic user information

VOLUNTEER WORK

Teacher's Assistant

Stuyvesant High School

January 2017 – June 2018

New York, NY

- Taught students various computer science topics
- Ensured students were engaged and focused on relevant tasks

Sensei (Tutoring Center Manager)

Stuyvesant CS Dojo

September 2016 – June 2018

New York, NY

- Taught students various computer science topics
- Ensured all personnel focused and effective
- Established an open atmosphere for collaboration and teamwork
- Performed various hardware and software repairs

LANGUAGES

C	● ● ● ● ●
Python	● ● ● ● ●
Java	● ● ● ● ●
C++	● ● ● ● ●
JavaScript	● ● ● ● ●
C#	● ● ● ● ●
Assembly (MIPS/Arm)	● ● ● ● ●
Ruby	● ● ● ● ●
Go	● ● ● ● ●

TECHNICAL SKILLS

HTML + CSS	● ● ● ● ●
Python Flask	● ● ● ● ●
Linux Systems	● ● ● ● ●
Bootstrap/Materialize	● ● ● ● ●
EMACS	● ● ● ● ●
Bash Scripting	● ● ● ● ●
MongoDB	● ● ● ● ●
Digital Electronics	● ● ● ● ●
Systems Administration	● ● ● ● ●
Regex	● ● ● ● ●
Qt	● ● ● ● ●
LaTeX	● ● ● ● ●
MATLAB	● ● ● ● ●
Protobuf	● ● ● ● ●
SQL	● ● ● ● ●

Volunteer Tutor

Computer Science and Technology for Urban Youth

📅 September 2016 — June 2018 📍 New York, NY

- Taught Java, Processing-Java, and basic computing concepts
- Engaged an audience using demonstrable projects
- Managed students and ensured order in a classroom

PROJECTS

Corundum Graphics Engine

Ruby, Python

📅 January 2018 — June 2018

A fully functional graphics engine built in Ruby that supports loading .obj files, and animations. Lighting utilizes the Phong reflection model, and graphics commands are handled by a customized language with its own lexer and parser.

The Internet of Things

Python, JavaScript, HTML5, GCP

📅 October 2019 📍 Hack Upstate XIV

A fully deployed social networking web application that has users discussing, comparing, and rating places and things anonymously. Uses Google Cloud Platform utilities to automatically parse image data for starting conversations.

The Safety Gauntlet

Python, JavaScript, MongoDB, Arduino

📅 September 2019 📍 BigRed//Hacks

Wearable hardware that puts important environmental and safety information in the hands of first responders and the people who need it the most. The Arduino wearable communicates through Bluetooth Low Energy to a centralized server for data aggregation.

Tamagogo

Python, JavaScript, HTML5, MongoDB

📅 February 2019 📍 BrickHack V

A deployed web-based game about improving your community, both environmentally and socially. Users are rewarded for doing good deeds with virtual creatures.

Grov

C#, MonoGame

📅 January 2019 — May 2019

A 3rd person shooter/exploration game with a cartoony style that has players exploring a procedurally generated enchanted forest. Features variable weapons, powerups, and enemies.

Tapout

Python, JavaScript, HTML5, Firebase

📅 June 2018 📍 StuyHacks VI

A web-based rhythm game in the style of Jackbox Games that has players tapping out songs for one another to guess for points.

Jammi

Python, JavaScript, HTML5, Firebase

📅 May 2018 — June 2018

A web app that allows multiple users to view a youtube video together, synchronized in real-time while having a comfortable chat via a chat room.

AWARDS

Winner: IBM Code & Response Challenge
Cusehacks 2020

Best Use of Wolfram|Alpha API
HackRPI 2019

Most Useless Hack
DandyHacks 2019

Best Use of MongoDB
BigRed//Hacks 2019

Best Game
StuyHacks 2018

Golden Ducky Award
Stuyvesant High School (2018)

ACTIVITIES

RIT Linux User's Group
Secretary

StuyHacks
Mentor

RITSec
Member

CodeRIT
Member

Rockstar Esolang
Rockstar Developer

Stuyvesant CS Dojo Website
Web Developer

Cyberstuy
Workshop Captain

Dungeons & Dragons
Player & DM

FRC Robotics
Software Engineer

EDUCATION

B.S. Computer Science
Rochester Institute of Technology

📅 Aug 2018 — May 2023 (Expected)

GPA: 3.93 (4.0 in-major)

Stuyvesant High School

📅 Sept 2014 — June 2018

GPA: 3.7