

Education

Georgia Institute of Technology
B.S. Computer Science, 2022

GPA: 3.8 Atlanta, GA
August 2019 - Present

- Selected courses: Objects and Design, Computer Organization and Programming, Introduction to Artificial Intelligence, Introduction to Computer Vision, Honors Linear Algebra with Abstract Vector Spaces, Discrete Mathematics, Combinatorics, Statistics and Applications, Macroeconomics

Selected Experience and Projects

The full list of projects I have worked on can be found on my GitHub: <https://www.github.com/2019aliu>

- **Software Developer Intern** Rockville, MD - remote
S&C Electric May 2020 - August 2020
 - Build a web application to view and edit settings of electrical products for consumers nationwide
 - Design a proxy-microservice type application to allow for easier maintenance and construction
 - Construct UI with React.js and supporting proxy with GraphQL and Apollo for client-side operations
 - Implement, test, and document microservice to retrieve data from S&C Electric's devices, and a microservice to open channels for subscribing to the devices' data
 - Technologies used: Java, Javascript, GraphQL, Redis, Spring Boot, React.js, WebSocket and STOMP, Docker
- **Product Manager** Online
Develop For Good September 2020 - Present
 - Managing a team of designers and developers to create a mobile application for CARE, a nonprofit organization
 - Maintain communication with client to understand the product's specifications
- **Epiphany** Champaign, IL - remote
HackThis - HackIllinois 2020 August 7-15, 2020
 - Lead the creation of a Web application that implements the Feynman technique into a web application
 - Created user flow diagram and wireframes (both low-fidelity and high-fidelity) to design the app
 - Implemented search functionality to intelligently search for topics to learn
 - Built some of the custom React components for the project and some of the UI screens (home, profile, create new topic, topic info)
 - Technologies used: Figma, Javascript, React.js, SCSS, Python, Flask, Elasticsearch, MongoDB (Atlas)
- **TAG** Atlanta, GA
Create-X: Idea to Prototype January 2020 - April 2020
 - Create a tracking device that has better range than most commercially available tracking tags by utilizing Global Positioning System (GPS)/Bluetooth/Wifi technology
 - Uses GPS to determine vicinity of device within 200 feet and Bluetooth/Wifi/Ultrasound to identify exact location through visual and auditory cues
 - Technologies used: Android Studio, Java, XML, Google Nearby Messages API, Google Maps API
- **Software Developer Intern** Greenbelt, MD
Fluency Security Corporation June 2019 - August 2019
 - Developed a web-based trouble ticketing system, FasterIncidentResponse, using MongoDB-Gin-Vue.js-Golang fullstack framework, and integrated it into existing log management software
 - Created developer's guide documentation with Postman, Markdown, and Web Developer tools
 - Unit tested log management software with Golang's unit testing framework
 - Technologies used: Golang (including Gin server), MongoDB, Bootstrap, Vue.js, Node-RED, Postman

Research Experience

- **Move2Music** Atlanta, GA - remote
Parikh Lab August 2020 - Present
 - Research uses of recurrent neural networks and reinforcement in generating music from video footage of dance
- **Migraine Research** Great Falls, VA
Neuroscience Research Lab June 2018 - January 2019
 - **Title:** Exploration of Two-Dimensional Materials for Inhibition of the Calcitonin Gene-Related Peptide Pathway in Migraines
 - Employed high-performance CPU cluster and slurm management in collaboration with high school's computer systems lab
 - Continued using ABINIT, an open-source package for making predictions about molecular systems based on solving quantum physics equations.
 - Research proposal accepted by neuroscience research lab at high school, received guidance and \$2400 funding for project

Skills

Languages: Java, Python, JavaScript/ES6

Infrastructures and Frameworks: Git, Node.js/V8, React.js, Bootstrap, WebSocket, MongoDB/MongoDB Atlas, Firebase, Keras, Tensorflow

Software: Terminal (Linux, Mac), Vim, Android Studio, Figma, Jupyter Notebook

Campus Organizations

- **Social Committee Member, Georgia Tech Swim Club** Atlanta, GA
Georgia Tech August 2019 - Present
 - Organize and manage funds for social events for the swim club, such as weekly virtual trivia and other socially-distanced events
 - Practice, compete, socialize, and volunteer with the members and coaches of the swim club
 - Qualified for multiple events in the 2020 College Club Swimming National Championship (unfortunately cancelled)
 - Previous statuses: Member: August 2019 - July 2020
- **Executive Board Member, GT Pianoforte** Atlanta, GA
Georgia Tech January 2020 - Present
 - Redesign website for the organization using Wordpress
 - Manage piano jam sessions and manage social media on Discord
 - Play piano at concerts and socialize with other members of the club
 - Previous statuses: Member: January 2020 - September 2020