

## 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*
  - Led the design of backend, implementation, testing, and documentation of an application to view and edit settings of all S&C products, will be used to monitor 10000s of devices
  - Redesigned and implemented backend microservices and proxy to retrieve data from S&C Electric's devices, resulting in 4x speed up and 99% reduction in the schema used to retrieve data
  - Collaborated with design team to redesign a user-friendly interface, and implemented the interface with newer technologies (React, Electron) to reduce code base size significantly
  - Technologies used: Java, Javascript, Redis, Spring Boot, WebSocket, STOMP, GraphQL, Apollo Server + Client, React.js, Electron.js
- **Product Manager and Team Lead** Online  
*Develop For Good September 2020 - Present*
  - Managing a team of designers and developers to create a mobile application to aid distributing resources for the Yemen crisis
  - Maintain communication with client to understand the product's specifications
  - Technologies used: Figma, React Native
- **Epiphany** Champaign, IL - remote  
*HackThis - HackIllinois 2020 August 7-15, 2020*
  - Lead the creation of a Web application that implements the Feynman technique, a highly effective learning 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*
  - Created a tracking device that has better range than most commercially available tracking tags by utilizing Global Positioning System (GPS)/Bluetooth/Wifi technology
  - Used 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 SDK, 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 for use at client demonstrations
  - Created developer's guide documentation
  - Unit tested log management software to find bugs
  - Drove trucks and wired ethernet cables
  - 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
  - Using modern encoding techniques and LSTMs for proof of concept to pair dance video with an appropriate music
- **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 to increase computation speed
  - Research proposal accepted by neuroscience research lab, received guidance and \$2400 funding for project

## Skills

**Languages:** Java, Python, JavaScript/ES6

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

**Software:** 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