

## Education

### Georgia Institute of Technology

GPA: 3.84 Atlanta, GA

*B.S. Computer Science, 2022*

*August 2019 - Present*

- Selected courses: Machine Learning, Artificial Intelligence, Design and Analysis of Algorithms, Computer Vision, Objects and Design, Computer Organization and Programming (Intro to C / Assembly), Database Systems, Honors Linear Algebra with Abstract Vector Spaces, Discrete Mathematics, Combinatorics, Cognitive Science

## 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 Engineering Intern** Atlanta, GA - remote  
*NCR Corporation* May 2021 - August 2021
  - Created Progressive Web App (PWA) version of NCR's Emerald POS from ideation to deployment, providing offline functionality for nation-wide grocery chains
  - Implemented proof of concept of cryptocurrency payment for Emerald using the Rinkeby testnet
  - Technologies used: TypeScript, IndexedDB, Workbox, React.js, Nest.js, Figma
- **Software Development Intern** Rockville, MD - remote  
*S&C Electric* May 2020 - August 2020
  - Led the design of backend, implementation, testing, and documentation of an application to monitor and manage 10000s S&C devices
  - Redesigned and implemented backend microservices and proxy to retrieve data from S&C Electric's devices, resulting in complete elimination of excessive data schema and 4x performance gain
  - Collaborated with design team to redesign a user-friendly interface, and implemented the interface with React and Electron to streamline and optimize code base
  - Technologies used: Java, JavaScript, Redis, Spring Boot, WebSocket, GraphQL, Apollo, React.js, Electron.js
- **Software Development Intern** Greenbelt, MD  
*Fluency Security Corporation* June 2019 - August 2019
  - Developed a web-based trouble ticketing system, FasterIncidentResponse, for use at client demonstrations
  - Unit tested and documented log management software
  - Technologies used: Golang, MongoDB, Bootstrap, Vue.js, Node-RED, Postman, Markdown
- **TAG ("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
- **Product Manager and Team Lead** Online  
*Develop For Good* September 2020 - December 2020
  - Managed a team of designers and developers to create a mobile application to aid distributing resources for the Yemen crisis
  - Maintained communication with Yemeni clients to understand the product's specifications and deliver designs and product updates
  - Technologies used: Figma, React Native

## Research Experience

- **FunTech Group** Atlanta, GA & remote  
*GT FinTech Lab* Spring 2021 - Present
  - Discover patterns in language used by the Federal Reserve correlating to stock trends
  - Conduct weak supervision to clean data and identify topics in financial documents
  - Analyze sentiment of Fed statements to understand Fed opinions on various market sectors
- **Move2Music** Atlanta, GA - remote  
*Parikh Lab* August 2020 - December 2020
  - Researched uses of recurrent neural networks and reinforcement in generating music from video footage of dance
  - Used modern encoding techniques and LSTMs to prototype pairing dance video with appropriate music

## Skills

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

**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 2020 - 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