

Alexander Y. Liu  
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2019aliu.github.io

## 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

## 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

## Experience

Be sure to check out my GitHub! You can find here: <https://www.github.com/2019aliu>

- **Software Developer Intern** Rockville, MD - remote  
*S&C Electric May 2020 - August 2020*
  - Lead 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
  - Make microservices to retrieve data from S&C Electric's devices and to open channels for subscribing to the devices' data, as well as a proxy to unify all microservices
  - Build a front end interface for both the web and desktop with React.js and Electron.js, respectively. Collaborated on design with all designers working on this app
  - Technologies used: Java, Javascript, Redis, Spring Boot, WebSocket, STOMP, GraphQL, Apollo Server + Client, React.js, Electron.js
- **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

- **Move2Music** Atlanta, GA - remote  
*Parikh Lab August 2020 - Present*
  - Research uses of reinforcement learning techniques 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
  - Used 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