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## Education

**Georgia Institute of Technology**  
*B.S. Computer Science, 2021*

GPA: 3.6 Atlanta, GA  
*August 2019 - Present*

- Selected courses: Data Structures and Algorithms, Objects and Design, Honors Linear Algebra with Abstract Vector Spaces, Discrete Mathematics, Combinatorics, Statistics and Applications, Macroeconomics

**Thomas Jefferson High School for Science and Technology**

Alexandria, VA

*Main Interests: Computer Science, Neuroscience*

*September 2016 - June 2019*

- Selected coursework: Artificial Intelligence, Mobile Application Development, Web Application Development, AP Computer Science A and Data Structures, Neuroscience Research Lab, Neurobiology, Research Statistics

## Skills

**Languages:** Java, Python, JavaScript, Golang, SQL, HTML, CSS, LaTeX, Dart

**Infrastructures and Frameworks:** Node.js, React.js, Bootstrap, Git, MongoDB/MongoDB Atlas, Firebase, Redis, Vue.js, Keras, Tensorflow, WebSocket, Heroku, MySQL, PyTorch, Angular, Flutter

**Software:** Terminal (Linux, Mac), Postman, Vim, Jupyter Notebook, Android Studio, Figma, Visual Studio Code, IntelliJ IDEA, PyCharm, jGRASP, Google Colab, Windows Subsystem for Linux (WSL)

## Selected Experience and Projects

The full list of projects I have worked on can be found on my GitHub: [github.com/2019aliu](https://github.com/2019aliu)

- **Software Developer Intern** Rockville, MD - remote  
*S&C Electric May 2020 - Present*
  - 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
- **TAG** Atlanta, GA  
*Create-X: Idea to Prototype January 2020 - Present*
  - Create a tracking device that has better range than most commercially available tracking tags by utilizing GPS/Bluetooth/Wifi technology
  - 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, Visual Studio Code

## Research Experience

- **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

- **Alzheimer's Disease Research**

Alexandria, VA

*Project Lead*

*June 2017 - August 2017*

- **Title:** Exploration of Chelation Materials for Treatment of Alzheimer's Disease
- Used ABINIT, an open-source package for making predictions about molecular systems based on solving quantum physics equations.
- Submitted to Siemens Competition 2017, achieved the semifinalist award