

# Austin Mitchell

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## EDUCATION

### Georgia Institute of Technology

Atlanta, GA

*Candidate for Master of Science in Computer Science with a Machine Learning Specialization*

*Expected May 2025*

- **Cumulative GPA:** 4.0

- **Relevant coursework:** Graduate Algorithms, Deep Learning, Machine Learning, Game AI

*Bachelor of Science in Computer Science (Highest Honors)*

*May 2024*

- **Cumulative GPA:** 3.71

- **Relevant coursework:** Design and Analysis of Algorithms, Data Structures and Algorithms, Discrete Mathematics

- Delta Chi Fraternity Treasurer and Member

## SKILLS

**Programming:** Java, Python, C, JavaScript, TypeScript, C#, SQL (PostgreSQL), C++, MongoDB, GoLang, Rust,

**Cloud Infrastructure:** AWS Lambda, S3, Terraform, Linux, Docker, CI/CD, Kubernetes,

**Web Development:** HTML, CSS, React, Node.js, Next.js, RESTful APIs, GraphQL, jQuery, Redux, OAuth,

**Artificial Intelligence:** Neural Networks, GPTs, GANs, Diffusion Models, Reinforcement Learning, Image Processing

**Interests and Hobbies:** Weightlifting, Nutritional Health, Financial Literacy, Traveling, Hiking, Cooking

## WORK EXPERIENCE

### Georgia Tech Research Institute (GTRI)

Atlanta, GA

*Graduate Research Assistant*

*May 2024–Present*

- Engaged in cutting-edge research to develop reliable and robust systems for our clients and improve security. Developed upon programs which aim to provide a platform to perform analysis across several domains to support evaluation of military systems.
- Performed analysis and evaluation of modeling and simulation scenarios to provide support for in-house and commercial support.

### Splunk

San Jose, CA

*Backend Software Engineer Intern*

*May 2023–July 2023*

- Developed with a team to create an improved implementation of a Splunk-based application for data ingestion and analysis of logged information, achieving an 800% performance improvement in categorizing this information into macroscale “episodes”.
- Engineered an infrastructure utilizing Apache Flink, AWS Lambda, and AWS S3 to create a fault-tolerant application by periodically taking snapshots of the streaming processor, allowing users to save potential days of time in the event of data loss or errors.

### QwickRate

Marietta, GA (Remote)

*Software Engineer Intern*

*August 2022–April 2023*

- Developed full-stack web applications utilizing a React, GraphQL, and PostgreSQL to allow for our customers to create KPIs to aid in the management of loans and facilitate the loan review process, reducing the time spent for small to medium-sized banks by 33%.

### Ultimate Kronos Group (UKG)

Atlanta, GA

*Full-stack Software Engineer Intern*

*January 2022–August 2022*

- Redesigned SQL stored procedures to alleviate indexing complexity on the database and decrease the processing time by 15%.
- Performed root-cause analysis on recurring issues and redefined stored procedures to enable better utilization of monitoring software such as Grafana to allow developers to more easily trace sources of potential issues and decrease the downtime for clients.

## PROJECTS

### Alzheimer’s Disease Detection Project

Atlanta, GA

*Machine Learning Models (Team of 3)*

*August 2023–December 2023*

- Spearheaded the training of Machine Learning models such as Support Vector Model (SVM) and Convolutional Neural Networks (CNN) on ~6,400 MRI brain scans to perform image categorization to determine the presence and severity of Alzheimer’s disease.
- Improved these models through image normalization and one-hot encoding to improve the SVM and CNN models’ efficiency and performance, leading to consistent accuracy scores of approximately 98.2% and 97.2% for each model, respectively.

### RushKit

Atlanta, GA

*Recruitment Web Application (Individual)*

*July 2022–December 2022*

- Determined communication as a major issue in various campus organizations’ recruitment processes and surveyed stake-holders.
- Designed and deployed a full-stack application with the assistance of stake-holder feedback using React.js to assist organizations in the recruitment of new members by providing a platform for communication between the organization and the potential members.

## ORGANIZATIONS

### Bits of Good

Atlanta, GA

*Developer*

*January 2023–May 2024*

- Orchestrated the development and deployment of web applications for non-profits to improve their efficiency and outreach programs.
- Collaborated with non-profits and developers to create a generalized volunteer management system, a highly-requested tool that improves the administrative workflow by over 50% by providing methods of organizing volunteers and centralizing information.