

Education

Georgia Institute of Technology

Aug 2022 – May 2025

Bachelor of Science in Computer Science 3.93/4.00

Atlanta, GA

- **Core Courses:** Data Structures and Algorithms, Design and Analysis of Algorithms, Computer Organization, Systems and Networks, Database Systems, Artificial Intelligence, Perception and Robotic, Information Security, Automata, Machine Learning

Programming Skills

- **Languages:** Java, C, Python, SQL, C++, Javascript, HTML, CSS, Typescript, GO, Rust
- **Database:** MySQL, MongoDB, DynamoDB, Redis, PostgreSQL
- **Frameworks/Library:** SpringBoot, MyBatis, SpringMVC, React.js, Vue.js, Pytorch
- **Tools:** Git, AWS, Postman, Maven, Docker, Firebase, Jira, Android Studio

Experience

Undergraduate Research

Aug 2023 – Present

Vertically Integrated Projects - Accelerating Materials Discovery with AI

Atlanta, GA

- Implemented pre-training techniques using denoising on fine-tuned Graph Neural Networks to improve the accuracy of predicting molecule properties of the QM9 dataset.
- Developed and maintained a codebase using **Python** and **PyTorch**, utilizing version control tools, **Git**, to manage the project efficiently.

Projects

GreenPlate Food Management Application

- Developed a user-centric application in **Android Studio** using **Java**, employing **Agile methodology** and **GitHub** for collaborative version control, focusing on efficient state management with asynchronous functions, and code maintainability and flexibility by incorporating advanced design principles and patterns.
- Integrated **Firebase's** real-time database and authentication to enhance application robustness and functionality, employing advanced database management practices.
- Led comprehensive testing efforts, achieving 100% coverage across 35 test cases to ensure software reliability and performance. Managed version meticulously with over 400 commits, facilitating team collaboration through 28 pull requests.

User Management System

- Enhanced UI aesthetics using **Vue** and **ElementUI** for accessing list of users, roles, and tasks assigned, and ensured communication with backend with **Axios**.
- Structured the architecture using **SpringBoot**, while integrating **SpringMVC**, **MyBatis** and **MyBatis-plus** to facilitate efficient database operations.
- Integrated **Redis** for caching and **MySQL** for database to store user information and roles.

Serverless Photo Gallery Application

- Built a web interface using **HTML** and **JavaScript**, hosted via **S3 bucket** static website hosting.
- Leveraged **AWS API Gateway** to create endpoints and deployed lambda functions in **Python** for processing and managing backend requests including sign-up, email verification, login, getting details of photos, adding photos, searching photos.
- Integrated **AWS Cognito** for user pool management, utilized **DynamoDB** for storing records of photos, and configured S3 buckets for storing photos.

Stocks API

- Implemented a robust Stocks **API** using **GO** for backend services, designed to handle high volumes of stock data efficiently, with **PostgreSQL** for optimizing data retrieval and supporting complex queries.
- Optimized the performance of the API by implementing caching strategies with **Redis**, which significantly reduces the load on the primary database and improves user experience.