




Alvyn Kwon

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EDUCATION

Georgia Institute of Technology

Expected Graduation Date: May 2027

Bachelor of Science in Computer Science

Atlanta, GA

- **Concentration:** Information Internetworks and Intelligence
- **Relevant Coursework:** Data Structures & Algorithms, Object-Oriented Programming, Linear Algebra, Discrete Mathematics, Design & Analysis of Algorithms, Artificial Intelligence, System & Networks, Computer Organization & Systems

EXPERIENCE

Lead Undergraduate Researcher

Aug. 2024 – Present

Accelerating Materials Discovery with AI Lab at Georgia Institute of Technology

Atlanta, GA

- Led a 5-member Agile subteam conducting LLM research for production AI tools, aligning machine learning models with real-world healthcare applications and improving predictive performance by 80%
- Designed and deployed production-grade Python systems for AI-based prediction tasks, increasing model accuracy by 80% through systematic debugging
- Analyzed model performance using regression metrics and loss tracking, generating insights and visual content for internal documentation and AI system presentation

Software Developer Intern

May 2024 – Aug. 2024

MasterKlass

Palisades Park, NJ

- Developed and deployed admin dashboard using Django backend and RESTful APIs, enhancing data accuracy across 400+ user profiles and improving user workflows and system usability
- Engineered a Python-based automation system, cutting manual data entry errors and processing time by 50%
- Led code reviews and implemented GitHub CI/CD workflows to automate testing and deployment, reducing production bugs and improving code reliability

PROJECTS

Airline Management GUI | SQL, Express, TypeScript, React, MySQL

April 2025

- Co-developed an airline management app, breaking down a complex description of airline processes to create a relational schema with 14 tables, 19 stored procedures, and 6 views, enabling full simulations of airplane operations and passing 1000+ unit tests
- Streamlined interactions with MySQL database by modularizing Express post/get requests and reduced code verbosity by over 70% through the creation of modular NextJS pages and React components for tables, views, and procedures

Custom Music Analysis Profile | React, Python, Django, PostgreSQL, Git

Oct. 2024

- Created Spotify Wrapped-style analytics web app using enabling dynamic user storytelling via personalized music data
- Built dynamic user analytics features with React, Python, and PostgreSQL, integrating APIs and async operations to create fast, interactive frontend experiences

Event Management Platform | Next.js, TypeScript, PostgreSQL, AWS, Google Cloud, Docker

Jan. 2024

- Built scalable event management app using Next.js and AWS-based PostgreSQL, enabling seamless scheduling and user interaction for 200+ students
- Dockerized microservices and deployed them on GCP, applying system-level programming and cloud infrastructure to support scalable backend architecture

Exoplanet Detection with Machine Learning | Python, PyTorch, Pandas, Scikit-learn

June 2022

- Preprocessed and balanced NASA Exoplanet Archive data using Python, Pandas, and SMOTE
- Engineered ML classification models, achieving 99.97% accuracy on 100,000+ data points, using Logistic Regression and feature engineering techniques

LEADERSHIP & ACTIVITIES

Project Manager

Jan. 2024 – Present

Georgia Tech Web Development Organization

Atlanta, GA

- Spearheaded Agile development of student-facing web apps used by 1,000+ students, improving digital engagement and streamlining communication
- Facilitated stakeholder feedback sessions to iteratively improve product usability and align feature development with user needs
- Utilized modern DevOps and deployment tools such as Vercel, AWS, and GCP to bring projects to production

TECHNICAL SKILLS

Languages: Java, Python, C, C++, JavaScript, TypeScript, HTML, SQL

Developer Tools: Git, Docker, PostgreSQL, AWS, Azure, Vercel, GCP, Figma, Redis, Kubernetes, Linux/CLI

Technologies: PyTorch, React.js, Next.js, Node.js, Express.js, Angular, NumPy, Pandas, Matplotlib, MySQL, JUnit

Organizations: GT WebDev, Undergraduate Research, Korean Computer Science Association