ALVYN KWON

New York Metropolitan Area | U.S. Citizen

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Education

Georgia Institute of Technology   **Expected Graduation Date: May 2026**
Bachelor of Science in Computer Science   *Atlanta, GA*

- Relevant Coursework: Data Structures, Algorithms, Object-Oriented Programming, Linear Algebra, Discrete Mathematics, Objects and Design, Computer Organization and Program, Introduction to Artificial Intelligence
- Clubs and Activities: GT WebDev, Undergraduate Research, Korean Undergraduate Student Association

Technical Skills

Languages: Java, Python, JavaScript, TypeScript, HTML, CSS, SQL, C/C++, MATLAB
Technologies/Frameworks: React, Next.js, Express.js, Tailwind CSS, Django, PyTorch, Prisma, Pandas
Tools: PostgreSQL, Docker, Amazon Web Services, Google Cloud Platform, JUnit, Git, Linux

Experience

Accelerating Materials Discovery with A.I. Lab   **August 2024 – Present**
Undergraduate Researcher   *Atlanta, GA*

- Fine-tuned Large Language Models (LLMs) using **Python**, **PyTorch**, and the **GNN library** to generate new crystal structures, improving prediction accuracy and supporting algorithmic processes
- Enhanced model performance through advanced fine-tuning techniques on textual representations of crystals, leading to faster research outcomes and more accurate predictions

MasterKlass   **May 2024 – August 2024**
Software Developer   *Palisades Park, NJ*

- Developed an admin site using **React** and **Django**, optimizing the academy's website for responsiveness with **HTML/CSS** and **JavaScript**, resulting in improved data accuracy and user engagement
- Engineered a **Python** back-end to automate data collection and analysis of student test scores, leveraging scripts and algorithms to streamline reporting and reduce errors
- Implemented data-driven strategies to enhance educational tools and platforms, improving overall user experience and functionality

Inspirit A.I. Scholars Research   **July 2022 - August 2022**
Summer Extern   *Remote*

- Manipulated and cleaned data from the NASA Exoplanet Archive using **Python** and **Pandas**, applying **Synthetic Minority Over-sampling Technique (SMOTE)** to improve dataset quality and balance
- Collaborated with researchers to conduct machine learning experiments in Jupyter Notebook, testing various graph types and models to optimize model selection and performance
- Developed and tested classification models, **achieving 99.97% accuracy** with a **Logistic Regression model**

Projects

Wrappify | *Python, Django, SQL, Git*   **October 2024**

- Engineered a Django-powered Spotify Wrapped clone, implementing user authentication and personalized data management using **Python**, **SQLite**, and **RESTful API** integration with Spotify's backend
- Developed complex database schemas and optimized **SQL queries** to process and store user music listening data, utilizing **agile methodologies** and version control with **Git** for efficient project development

Atlanta Plates | *HTML/CSS, Javascript, Django, Git*   **August 2024**

- Built full-stack restaurant search web app using **HTML, CSS, JavaScript, Django,** and Google Maps Platform API, creating dynamic, responsive user interfaces for location-based restaurant discovery
- Implemented **CI/CD pipelines** with GitHub Actions to streamline development, automate deployment, and enhance collaborative software development workflow

Magnidia | *Next.js, TypeScript, Tailwind CSS, Prisma, PostgreSQL, AWS, Google Cloud*   **January 2024**

- Led full-stack development of an event management platform using **TypeScript**, **Next.js, Prisma ORM**, and **PostgreSQL**, integrating **AWS** for serverless deployment
- Developed secure authentication with **NextAuth** and **Google Cloud**, ensuring safe, personalized user access for managing and organizing events
- Optimized the frontend with **Tailwind CSS** for responsiveness and streamlined **server-side API routing** for efficient event retrieval and management