

Siwan Yang

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EDUCATION

Georgia Institute of Technology

Bachelor of Science

Major in Computer Science; Specialization: Intelligence/Info-Internetworks

Relevant Coursework: Database Systems, Intro to Artificial-Intell, Machine Learning, Data Structure & Algorithm

Atlanta, GA

Expected Graduation: Spring 2026

SKILLS

- **Programming & Development:** Java, Python, C/C++, SQL, JavaScript/TypeScript, Kotlin, R
- **Frontend:** React, Next.js, Tailwind CSS, Responsive UI
- **Backend & DevOps:** FastAPI, REST APIs, Gradle, JetBrains Platform SDK, Git/GitHub, Docker, CI/CD (GitHub Actions)
- **Data & Databases:** MySQL, MongoDB, Firebase, Supabase, chromaDB
- **AI & ML:** LLM Integration, RAG, Embeddings, Vector DBs, Prompt Engineering, NLP

WORK EXPERIENCE

Software Engineering Intern

Samsung Electronics

Seoul, South Korea

June 2025 – Aug 2025

- Built a JetBrains IDE plugin for Codemate (Samsung's Code Assistant) in Kotlin/Gradle, adapting VS Code core to the JetBrains Platform to enable LLM chat, code completion, and RAG across IntelliJ-based IDEs.
- Centralized shared configuration modules (environment settings, product metadata, token handling) into a single core layer, reducing duplicated logic by ~90%, improving maintainability, and simplifying code review processes across IDEs.
- Implemented a secure credential management flow for JetBrains using PasswordSafe API, including a new token input UI and protocol-based request/response handling for authentication and feature access.

Software Engineering Intern

IBM Research - Open Liberty

Atlanta, GA

May 2024 – Aug 2024

- Implemented a Java-based web application utilizing JMS, RESTful APIs, and Open Liberty, enabling asynchronous communication between microservices and improving system reliability.
- Authored a technical guide of over 3,000+ words on setting up Jakarta Messaging with Liberty Messaging Server and IBM MQ, published as an official Open Liberty guide.
- Optimized automated testing for Open Liberty guides by modifying YAML-based test workflows, reducing CI/CD failures by 90% and increasing test coverage across documentation.

RESEARCH EXPERIENCE

Undergraduate Research Assistant

Georgia Institute of Technology - NLPx Lab

Atlanta, GA

Aug 2024 – Dec 2024

- Worked with a postdoc to design and execute a chatbot safety study, labeling conversations and creating an evaluation taxonomy for automotive repair responses.
- Labeled and audited 1,000+ conversations, identifying hallucinations, incorrect answers, and structural weaknesses in LLM responses.

PROJECTS

Buzzbot (Conversational GT Campus AI Assistant)

RAG, Next.js/Tailwind CSS, FastAPI, Claude 3.5, Vectorization, Embeddings

- Led the design and development of a campus-specific RAG chatbot assistant, coordinating AI/LLM, full-stack, and data workstreams to deliver an end-to-end MVP.
- Developed a responsive chat UI in Next.js/Tailwind, integrating a Node proxy and custom FastAPI backend for real-time token streaming and low-latency user experience.
- Implemented embedding-based retrieval with ChromaDB and citation-first prompt engineering, significantly improving grounding and answer reliability with Claude 3.5.

US flight Spam Comment Classifier

C, NLP, Naive Bayes Algorithm, Sentiment Analysis

- Built a CLI-based spam classifier from scratch in C, implementing a full NLP pipeline (tokenization, stemming, stopword removal, vocabulary thresholding).
- Applied Laplace smoothing and log-probability calculations to balance precision/recall across vocabulary thresholds.
- Packaged project using Makefile for easy build/run, and documented evaluation methodology.