

Eric Liao

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EDUCATION

Georgia Institute of Technology

Atlanta, GA

B.S. Computer Science

Expected Graduation: **May 2025**

Relevant Coursework: Data Structures and Algorithms, Algorithm Design, Computer Architecture & Organization, Linear Algebra, Applied Combinatorics, Probability & Statistics, Machine Learning, Database Systems, Systems & Networks

EXPERIENCE

Georgia Tech Research Institute

Atlanta, GA

Machine Learning Research Assistant

Jan 2024 – May 2024

- Automated temporal knowledge graph construction and with efficient relation extraction techniques to improve the performance and logical reasoning ability of general purpose language models.
- Developed and optimized advanced retrieval and reasoning strategies for GPT-RE based models, significantly enhancing relation extraction accuracy and NULL recall in knowledge graph construction tasks.
- Implemented a modular, API-driven codebase to facilitate flexible experimentation and integration of new methodologies.

BMW Group

Spartanburg, SC

Software Engineer Intern

August 2023 - December 2023

- Supported database build checkpoints for order sequencing, resource provisioning, and build status tracking through designing and implementing automated test cases using Pytest.
- Developed a cloud-based resource-orchestrator scheduling tool, which reduced production downtime by 30% by allowing production supervisors to control database and resource modifications through consolidated server commands.
- Integrated trained AI chatbot assistant into Confluence to retrieve titles through smart keyword extraction and cosine similarity search using ChromaDB, VectorDB, and Confluence REST API.
- Automated GraphQL API calls by scheduling metadata pulls from a central data hub into AWS S3 buckets for seamless storage using AWS Lambda.

Cleveland Clinic

Cleveland, OH

Software Engineer Intern

May 2023 – August 2023

- Developed an automated phonetic speech analysis algorithm in PRAAT module using M to perform vocal spectrographic and waveform analysis leading to 32% increase in speech analysis accuracy.
- Designed automated patient onboarding and file reading management tool algorithm in Python to increase onboarding efficiency.
- Spearheaded expanding the security and code quality in data access control and engineering data applications by integrating SonarQube into the CI/CD pipelines and Epic.

PROJECTS

Wrapify

Java, Spotify Web API, OpenAI API

- Developed a personalized Spotify Wrapped mobile application allowing users to play music and receive personalized insights on top songs/artists.
- Utilized Firebase to handle backend tasks such as securing data storage and real-time updates, and parsed JSON data to model a music track's details using Spotify API.

Smart Fitness Tracker

Python, ML, Jupyter

- Created machine learning model allowing users to classify barbell exercises and count repetitions through accelerometer and gyroscope data from a fitness watch device.
- Wrote python scripts to support data visualization and LOF outlier detection using Pandas Library, leveraging techniques such as Naive Bayes and Random Forest.

SKILLS

Languages: Java, Python, C, C#, Javascript, Assembly, M, HTML, SQL

Frameworks & Tools: ReactJS, PyCharm, Pytest, AWS, Django, Vagrant, Docker, Node.js, Firebase, ChromaDB