

Erik Li

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EDUCATION

Georgia Institute of Technology

Atlanta, GA

B.S & M.S in Computer Science, GPA: 4.0

May 2026

- **Concentration:** Artificial Intelligence & Theoretical Computer Science
- **Selected Coursework:** Data Structures & Algorithms, Design & Analysis of Algorithms, Machine Learning, Intro to AI, Object-Oriented Programming, Linear Algebra, Probability & Statistics

EXPERIENCE

Amazon Web Services

May 2024 – August 2024

Software Engineer Intern

Seattle, WA

- Worked on AWS Cryptography Key Management Services team to develop an automated security system to detect hardware security module tampering for cryptographic computing regions serving 138 billion requests/day.
- Increased requests served by 7+ billion/year by building a cloud-native service to automate HSM health checks.
- Engineered control plane APIs using Java, Spring Boot, and AWS SDKs to programmatically extract host data.
- Reduced ticket resolution time by over 30% by developing logic for system event differentiation using AWS Lambda and integrating AWS CloudWatch and DynamoDB for real-time event logging and data analysis.

Neural Data Science Lab

January 2024 – Present

Undergraduate Researcher

Atlanta, GA

- Designing a neurodata preprocessing algorithm for efficient training of a transformer for full neural modeling.
- Building and debugging existing data pipeline scripts for automated retrieval and storage of updated neurodata.

Wabtec Corporation

May 2023 – July 2023

Software Engineer Intern

Atlanta, GA

- Improved automatic locomotive equipment inspection efficiency by over 200% by designing a new train tag decoding system and building a Python API to handle 60k+ train car datasets in a Postgres database.
- Created a Python-based interface app for streamlined communication with a TCP/IP RFID tag reader system.
- Developed a multinomial ML tag interference filtering mechanism that reduced false tag reads by over 40%.
- Integrated decoding, RFID, and ML features in a full-stack application built with React, Flask, and Postgres.

Automated Algorithm Design Research Team

January 2023 – May 2023

Undergraduate Researcher

Atlanta, GA

- Bolstered sentiment analysis framework for stock prediction by streamlining social media web scraping APIs.
- Optimized deep RL models for maximizing portfolio quality by building performance evaluation functions.
- Created a multi-objective GP framework outperforming standard ML models for binary classification problems.

PROJECTS

Parkinson's Disease Diagnosis | *Python, OpenCV, scikit-learn, NumPy, Tkinter*

- Machine learning application that diagnoses Parkinson's disease with 85% accuracy through hand drawing tests.
- Implemented an image analysis algorithm supporting processing of both spiral and wave hand-drawing tests.
- Designed a graphical user interface allowing users to upload their own drawings for at-home diagnosis.
- Integrated an input system that collects users' data for continuous model growth and accuracy improvement.

Image2Code | *JavaScript, VSCode API, Tesseract.js, Python, Flask, guesslang*

- Visual Studio Code extension that transforms an image of code into a file containing the source code content.
- Optimized transcription accuracy by training Tesseract OCR to support default fonts from popular text editors.
- Created a Flask API for automatic file extension name formatting that supports 10+ programming languages.

SKILLS

Languages: Python, Java, C, C++, JavaScript, L^AT_EX, HTML/CSS, MATLAB

Technologies: Git, MySQL, Postgres, React, Flask, sklearn, OpenCV, PyTorch, Selenium, Firebase, Android Studio

Communication: English (native), Mandarin (bilingual), French (proficient)

Interests: Basketball, Cooking, Running, Reading, Violin, Writing