Frank Li

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Education

The Ohio State University — Columbus, OH
M.S in Computer Science and Engineering (Expected) — Expected Aug 2025 – May 2026
B.S. in Computer Science and Engineering with Honors **(GPA 4.0/4.0)** — Aug 2022 – May 2025
Certifications: AWS Cloud Practitioner

Technical Skills

Languages: Java, Python, C/C++, HTML, CSS, JavaScript, JSON, XML, SQL, GraphQL, x86 Assembly, MATLAB, Groovy, SwiftUI
Libraries/Frameworks: React, pandas, PyTorch, scikit-learn, Springboot, JUnit, Apache Spark, Ruby on Rails
Other: Kubernetes, Git, AWS, Terraform, Jenkins, Postman, Linux, Agile, Jira, CockroachDB, DBeaver, MySQL, Splunk, Vim

Professional Experience

JPMorganChase — Jun 2024 - Present
Software Engineer Intern

- Reduced datalake registration time by 90% for 74 data engineers by using Java to develop an app to process data models
- Migrated 9 databases from OracleDB to CockroachDB, added Splunk logs to monitor performance after completed migrations
- Cut data processing times by 20% by creating 5 scalable ETL pipelines using Spark to transform investment data from 8 teams
- Implemented a API to register datasets with Springboot, deployed using a CI/CD pipeline of Jenkins, Docker and Kubernetes

OSU Department of Computer Science — Jan 2024 - Present
ML Research Assistant

- Operated in the DATUM lab to create an open-source library to standardize time series classification under John Paparrizos
- Implemented imaging transform and feature extraction methods like Gramian Angular Fields, Matrix Profiles, and TSFRESH
- Collaborated with 4 others to document, replicate, and run performance experiments on over 200 recent research publications

Fiserv — Jun 2023 – Aug 2023
Software Engineer Intern

- Enhanced team communication by developing a lambda function for programmatic email sending; used 8000 times per month
- Programmatically remediated access for over 200 S3 buckets by creating an automated workflow using Torq and Terraform
- Advanced database efficiency by integrating caching and pagination in GraphQL queries to improve retrieval time by 11%
- Detected broken data pipelines by using Python to daily batch query SQL databases, detecting 2 critical pauses over 2 months

Leadership Experience

Big Data Analytics Association — Oct 2022 – Present
Leadership Team: Webmaster, Special Project Coordinator

- Reconstructed the club website using HTML, CSS, React.js, Astro, and Tailwind CSS, attaining over 300 views monthly
- Coordinated networking events and held technical workshops on machine learning frameworks such as PyTorch and scikit-learn
- Spearheaded member initiatives such as an annual hackathon, sponsor directed internships, and professor led research programs

OSU Department of Computer Science — Oct 2022 – May 2023
Teaching Assistant, Undergraduate Course Developer

- Taught fundamental topics such as Java, JUnit, object-oriented programming, and data structures/algorithms to 40 students
- Created a JSON tokenizer and parser for the OSU Components Library to transition the curriculum from using XML to JSON
- Designed and implemented a mathematical expression JSON tree generator with a recursive evaluator for a course project

Projects

Malaria Blood Analysis App | SwiftUI, Python, Pytorch — Feb 2024

- Created an iOS app in SwiftUI to pair with portable microscopes to diagnose malaria from blood smears with 97% accuracy
- Developed a Python script for automated image segmentation; trained a neural network on 3,000 images for classification

GroupMe Antispam Bot | AWS (Lambda, Eventbridge, API Gateway), Python, Pytorch — Jan 2024

- Architected a GroupMe antispam bot and deployed it using AWS, monitoring over 2000 messsages daily in 14 group chats
- Marketed the bot to 14 school clubs through demo sessions and charged a monthly subscription to cover cloud expenses
- Filtered spam messages with 97% accuracy by engineering an algorithm utilizing rule-based matching and a random forest classifier