Olivia Liu

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EDUCATION

Purdue University   May 2026

*Bachelor of Science, **Computer Science Honors**, Minor in **Finance** & **Mathematics***   *GPA: 3.75*

- *Courses:* Data Structures & Algorithms, Object-Oriented Programming, Analysis of Algorithms, Artificial Intelligence, Computer Architecture, Systems Programming, Discrete Mathematics, Linear Algebra, Probability
- *Leadership & Organizations:* Computer Science Women's Network (Marketing Specialist), ML@Purdue, The Data Mine - Corporate Partners, Launchpad, Purdue Hackers, Society of Asian Scientists and Engineers

TECHNICAL SKILLS

Languages: Java, Python, C/C++, JavaScript, TypeScript, HTML, CSS, R, Dart, SQL, Swift
Frameworks: React, React Native, PyTorch, NumPy, Pandas, Flutter, Node.js, Express, Flask, Spring Boot, Django
Technologies: Git, AWS, Linux, Docker, Firebase, Supabase, REST API, Azure

EXPERIENCE

Lyft   May - August 2025

Backend Software Engineering Intern   *San Francisco, CA*

- Developed an AI-powered document processing pipeline using RAG and LLMs, automating transcription and compliance validation of driver-submitted documents to minimize manual review time
- Centralized 100+ driver document standards by building a scalable knowledge base using AWS S3 and Bedrock Knowledge Base, enabling structured retrieval across document types and regions
- Built APIs to power natural language queries against knowledge base, supporting real-time agent assistance and enhancing document review accuracy
- Instrumented observability dashboards to monitor system and API-level performance, enabling latency analysis and optimizations that reduced average response time by 40% via in-memory caching and retrieval strategy tuning

AIM Lab   May 2024 – May 2025

Machine Learning Researcher   *West Lafayette, IN*

- Conducted research on the usage of machine learning algorithms for ASL-to-text translation with AR glasses
- Applied advanced computer vision techniques to achieve real-time ASL gesture recognition with 92% accuracy, improving translation precision and responsiveness in varied lighting and background conditions
- Developed and optimized Python automation tools that increased data collection efficiency by over 200% and facilitated large-scale machine learning model training and testing

CTB, Inc.   August – December 2024

Data Science Researcher   *West Lafayette, IN*

- Engineered and implemented data models to continuously analyze data and and detect anomalies
- Developed and deployed RESTful APIs using Flask and Django to enable real-time data processing and seamless integration with front-end application
- Automated ETL pipelines using Azure, SQL, and Python, accelerating model retraining cycles by 40%

PROJECTS

RandezVous | *Flutter, Dart, TypeScript, Node.js, Express.js, Supabase*

- Developed mobile app that facilitates spontaneous meetups by notifying friend groups at random times to gather at a designated location. Implemented real-time location tracking and notifications using Google Maps API and Firebase Cloud Messaging. Reduced deployment time by 40% by building CI/CD pipelines using GitHub Actions

Student Productivity/Health App | *React Native, JavaScript, Node.js, Firebase*

- Created a student productivity and health mobile app to encourage a balanced lifestyle. Implemented Pomodoro timer and sleep recommendation features using React Native for the interface and Firebase for backend support

AI Lipstick Recommender | *Python, Flask, JavaScript, HTML, CSS*

- Developed a website that generates lip product recommendations for users based on their natural lip shade through image processing and implementing Open AI using Flask

AWARDS/HONORS

Purdue Computer Science Continuing Student Award Boeing Student Organization Winner, 2024
USA Computing Olympiad (USACO) Silver Division, 2023
NCWIT Aspirations in Computing Greater Houston Affiliate Award Winner, 2022/2023