

# Haotian Li

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## EDUCATION

### University of Michigan

*Bachelor of Science in Computer Engineering*

**Ann Arbor, MI**

*Expected May 2027*

- GPA: 3.6/4.0
- Relevant Coursework: Data Structures and Algorithms, Object Oriented Programming, Computer Organization, Web Systems, Discrete Mathematics, Computational Linear Algebra
- Activities: Michigan Blockchain, Collaborative Lab for Advancing Work in Space

## TECHNICAL SKILLS

**Languages:** C, C++, Python, TypeScript, Javascript, SQL (Postgres), HTML, CSS

**Frameworks:** Next.js, Express.js, Node.js, React, Tailwind CSS, NumPy, Pandas

**Developer Tools:** Git, Linux, VS Code, IntelliJ, PyCharm, Supabase, Postman, Valgrind, Bash, Jupyter, Github

**Concepts:** Software Engineering, CI/CD Pipelines, Frontend, Backend, REST APIs, Machine Learning, Agile

## EXPERIENCE

### The Corso Group

*Software Engineer Intern*

**Jun. 2025 – Present**

*Remote*

- Engineered an OpenCV-based video deidentification system to blur sensitive content in surgical videos that processed over 100,000+ frames using CVAT with 98% accuracy for future ML dataset usage
- Implemented an automated web scraping and video processing pipeline using Python and ffmpeg to extract and transcribe 2,000+ surgical videos, then segmented into surgical phases using OpenAI Medical Whisper, achieving 500 hours of clean surgery data
- Led a team of 4 annotators on a HPC infrastructure, implementing automated XML-to-video processing workflows for efficient medical training dataset production.

### Collaborative Lab for Advancing Work in Space

*Augmented Reality Software Developer*

**Sep. 2024 – May 2025**

*Ann Arbor, MI*

- Designed a voice assistant feature using C# and OpenAI Whisper, connecting with ESP32 Arduino board for real-time speech detection, achieving 98% reduction in task completion time (300 to 5 minutes)
- Developed REST API communication framework between Unity AR application and TCC web backend, enabling real-time data synchronization with Northeastern AR team, resulting in an average 150% more samples obtained
- Collaborated with a team of 20 to implement SDLC methodologies and Agile practices, facilitating regular sprints to enhance communication and project tracking.

## PROJECTS

### OnionUSD-P | *Typescript, React, Node.js, PostgreSQL, Blockchain*

- Secured 1st Place (\$2,500) at Solana hackathon developing enterprise stablecoin platform with React TypeScript frontend, Node.js backend microservices, PostgreSQL Database, and Solana smart contracts
- Integrated on chain with 200+ users, 500+ transactions, and over \$10,000 dollars worth of payments secured
- Developed an automated stablecoin protocol (pUSD) featuring algorithmic 1:1 peg stability, fee optimization algorithms, and transaction revocation capabilities for institutional treasury management
- Implemented payment system with Solana Pay integration, real-time dashboard analytics, and Firebase-secured multi-sig wallets supporting concurrent corporate and employee interfaces

### Posture Notifier | *React, Tailwind CSS, Node.js, Flask, RestAPI, Python, Git, Javascript*

- Designed and developed an AI posture detection app that corrects slouching using computer webcam via real-time notification feedback, resulting in improved user posture by 60%
- Built a dataset of 500+ images via Roboflow for the posture LLM training, achieving 98% model accuracy
- Engineered a React and Tailwind CSS frontend for smooth UX, with Flask, Node.js, along with Fast API for efficient backend processing
- Developed a RESTful API from scratch to seamlessly translate JSON data from Baml LLM into actionable Python routines, ensuring smooth data processing and API communication
- Gained 25+ long term users, provided over 500 automated posture scans, and corrected faulty postures 200+ times