Yuheng Pan

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Education

Shanghai JiaoTong University | Undergrad Excellence Scholarship **September 2021 – August 2025**
Bachelor of Electrical and Computer Engineering *Shanghai, China*

University of Michigan | Dean's List **September 2023 – May 2025**
Bachelor of Computer Science *Michigan, United States of America*

University of Illinois Urbana-Champaign **September 2025 – January 2027(E)**
Master of Computer Science *Illinois, United States*

Skills

Programming Languages: C/C++, C#, GOLANG, Python, SQL, JAVA
Technical Stack: Operating Systems, Distributed Systems, Computer Networks, Full Stack Software Development

Internship

Shanghai Sodick Software Co. Ltd **November 2023 - February 2024**
Software Engineer Intern *Shanghai, China*

- Developed an SQL-based tool for data gathering and analysis. Implemented regular expressions for precise data extraction from raw industry files and ensured compatibility with remote database systems. Developed interactive dashboards using Windows Presentation Foundation for real-time data visualization.

Research

Tracking of Slender Moving Objects Interacting with Granular Matter **February 2024 - February 2025**
Undergraduate Research Assistant *University of Michigan*

- Designed a Machine Learning based tracking tool to monitor slender moving objects, generating binary masks of the worm in a complicated environment. Enhanced tool with environmental-specific adaptations, allowing for accurate tracking in different settings.
- Conducted motion analysis of nematodes in granular media, producing detailed biophysical interaction data that directly supported two ongoing research projects in Mechanical Engineering at the University of Michigan.

Project

LinkedIn Add-on for H1B Sponsorship Analysis | *Python* **Feb 2025**

- Developed a minimum viable product to analyze and visualize 10 years of OPT and H1B sponsorship data from public data, enabling interactive exploration and data selection.
- Analyzed potential users and market segments; performed cost–revenue modeling to evaluate business feasibility of product deployment.

Distributed File System | *Go* **Sept 2025 - Dec 2025**

- Developed **HyDFS**, a Cassandra-inspired distributed file system supporting replication, failure recovery, and rebalancing across 10 Virtual Machines.
- Implemented per-client append ordering, read-my-writes, and eventual consistency through versioned block-based merges to ensure correctness under concurrent operations
- Integrated HyDFS into **RainStorm**, a distributed stream processing system analogous to Apache Storm, supporting multiple computation stages and real-time tuple streaming across VMs

GopherAI: A Golang AI Service Platform | *Go* **Sept 2025 - Current**

- Built a Go-based **AI application service platform** with Gin, designing RESTful APIs (health, sessions, history) and middleware-ready routing for low-latency, high-throughput requests.
- Implemented a **pluggable chat layer** with OpenAI-compatible and Ollama backends, supporting both synchronous and **SSE streaming** responses with per-session model selection and extensible orchestration.
- Integrated **local ONNX image recognition** (MobileNetV2 + labels via ONNX Runtime) and shipped a **zero-build** HTML/JS demo page served by the backend for end-to-end, interview-ready showcases.
- Designed and implemented JWT-based authentication, session management, and permission control to secure user data, maintain login state, and support role-based access across APIs.