Yiying(Mindy) Jiang

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EDUCATION

Carnegie Mellon University — Pittsburgh, PA
Master of Science in Computer Science - Mobile and IoT Engineering — May 2025

University of Michigan — Ann Arbor, MI
Bachelor of Engineering in Computer Science (GPA:3.84/4.0, Dean's Honor List) — May 2023

Shanghai Jiao Tong University — Shanghai, China
Bachelor in Electrical and Computer Engineering (Undergraduate Excellence Scholarship) — Aug 2023

Relevant Courses: Web App Development, UI Development, Operating Systems, Distributed Systems, Database Systems, Computer Networks, Computer Architecture, Computer Security, Data Structure and Algorithm.

SKILLS

Programming Languages: Advanced: C++, Python; Intermediate: C, JavaScript, SQL, Go, C#, Assembly
Programming Tools and Frameworks: Git, Linux, Docker, Jira, Bootstrap, AWS, gdb, Pytorch
Web Application Development: HTML, CSS, React.js, Vue.js, jQuery, Flask, Network Socket

PROFESSIONAL EXPERIENCE

Shanghai Gengyuan Education Technology Co. Ltd. — Shanghai, China
Software Engineer Intern — Mar - May 2021

- Led a cross-functional team of five in designing an Arduino-embedded smart rover prototype, tailored as a teaching tool to enhance students' project-based learning.
- Improved smart rover's interactivity by implementing real-time written number recognition using Python, achieving a 99% accuracy through a trained 14-layer convolutional neural network.
- Showcased the rover's capabilities at the company's open day, contributing to a 28% increase in course enrollment.

ACADEMIC PROJECTS

Reliable Transport Protocol WTP — Mar - Apr 2023
Computer Networking — University of Michigan

- Built a reliable transport protocol in C++ on top of UDP, providing reliable and in-order delivery of UDP packets in the presence of events like packet loss, delay, corruption, duplication, and reordering.
- Tested and refined the protocol with Mininet on VMware using a simulated topology, achieving successful 10MB video transmission in a 250 Mbps bandwidth network with 80% loss rate, 75% reorder rate, and 600ms delay.
- Optimized the protocol by improving the sliding-window algorithm with buffering to minimize re-transmissions, resulting in a 25% reduction in transmission time.

Paxos-based Key-Value Storage Service — Oct - Dec 2022
Distributed Systems — University of Michigan

- Developed a robust Paxos-based distributed key-value storage system in Go, ensuring high consistency with mutex under frequent server re-configurations and a 20% failure rate in the network.
- Ensured the system's linearizability by adopting logical clock to maintain the sequential relationships between requests.
- Optimized the system to support parallel communications between servers using multi-threading, resulting in a 15% reduction in response time.

Instagram Clone Web App — Jan - Mar 2022
Web Application Development — University of Michigan

- Engineered a web-based Instagram clone featuring client-side and server-side dynamic pages, encompassing essential functionalities such as user authentication, commenting, liking, photo sharing, and infinite scroll.
- Implemented a reusable front-end user interface using React.js and programmed a back-end API in Python with a MySQL database utilizing Flask and REST API.
- Deployed the web application on AWS IaaS by creating an EC2 instance to enhance availability and accessibility.