Yuhao Lu

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EDUCATION

University of Northeastern
Master of Computer Science

Sept 2023 – Dec 2025
Vancouver, Canada

SKILLS

Language: Java, C, C#, C++, Python, JavaScript, TypeScript, SQL, Shell, HTML, CSS, Bash, Pytorch
Frameworks/Databases: Spring Boot, MyBatis, Express, .Net, MySQL, PostgreSQL, MongoDB, Redis
DevOps/Cloud: Docker, Kubernetes, GitLab, CI/CD, AWS, GCP, Zookeeper, Kafka, RabbitMQ, RocketMQ
Frontend/Testing/Tools: React, Redux, Git, Linux, Maven, IDEA, Angular

EXPERIENCE

State Grid Corporation of China
IT Support Specialist

May 2025 – Aug 2025
Shanghai, China

- Provided comprehensive technical support in a collaborative team environment, assisting **200+ users** with hardware, software, and network issues.
- Installed, configured, and maintained **Windows 10/11** workstations, **Microsoft 365** applications, and Active Directory user accounts
- Resolved **30-40 support tickets** weekly through ticketing system, prioritizing critical issues while managing multiple concurrent requests. Communicated complex technical concepts clearly to non-technical staff, achieving **95%+** satisfaction ratings
- Performed **hardware troubleshooting, software deployments, and system updates across Microsoft environment** including Exchange, SharePoint, and Teams. Created and maintained user-facing documentation including step-by-step guides for common software issues, password reset procedures, and IT onboarding materials

Northeastern University
Research Assistant in LLM

Jan 2025 – Apr 2025
Vancouver, Canada

- Processed over **500** audiofiles by trimming to **30** seconds and augmented data using noise addition, pitch shifting, and time stretching, improving dataset robustness by **20%**.
- Incorporated **WavLM-Large** for audio processing and **TinyLlama** for language understanding(LLM), reducing computational resource usage by **30-50%** compared to larger models.
- **Fine-tuned** the linear projector across 50 epochs with 2.5k steps, achieving a **10%** decrease invalidation loss across experiments.Designed and evaluated three experimental setups—audio-only, text-only, and **multimodal**—demonstrating a **5.7%** improvement in F1-score with multimodal analysis over single-modality approaches.

DaHua Construction & Logistics Company
Software engineer intern

June 2024 – Aug 2024
Shanghai, China

- Co-developed a **Construction Site Attendance System in C# and .NET** used by **8+ job sites** and **300+ workers**, automating time tracking and HR reporting.
- Built backend RESTful APIs using **Java + Spring Boot**, supporting **10,000+ daily check-in records** and storing data in a **MySQL** database. Designed frontend components in **React**, reducing HR data input time by ~**80%** through automated summaries and dashboards.
- Integrated with **DingTalk API** to sync real-time attendance data and send status notifications to managers, cutting down communication lag.
- Wrote **unit tests** for all major API endpoints, achieving **90%** test coverage and reducing post-deployment bugs by over **60%**.
- Result: Improved attendance record accuracy, reduced daily HR processing time from ~**2 hours to under 20 minutes**, and enhanced system scalability.

PROJECTS

Distributed File Storage System

Aug 2024 – Dec 2024

- Developed a distributed file storage system with high availability and strong consistency. The stress test showed **20,000** QPS for 4KB file mixed read and write, and the P99 delay is **800** milliseconds. Implemented a file client that encapsulates file content into KV requests and sends them to the backend, with support for **zlib** for lossless content compression.
- Implemented the **Raft** consensus algorithm, with core functions such as Leader election, log replication, and snapshot update. Based on the consistent hashing architecture, the data is partitioned into Shards and can be migrated in multiple Raft Groups.
- Implemented support for storage engines such as **RocksDB**, B-tree, and hash tables to adapt to scenarios with different IO models. Based on asynchronous Apply, **ReadIndex**, and **FollowerRead** to optimize read performance, and based on **Prevote** to avoid frequent master switching.

High Performance Gaming Platform

Feb 2024 – Apr 2024

- Built a high-performance gaming web platform with a backend built on **SpringBoot**, **MyBatis**, **Redis**, **AWS RDS** and **Kafka**, and a frontend built with **React**. Supported up to 10,000 concurrent users, handled over **3,000** transactions per second, and maintained a P99 latency of less than 1 second.
- Implemented databasesharding and table partitioning using **Amazon RDS** to effectively model user data, game resources, and transaction records, and enhanced query performance by using indexing and partitioning techniques.
- Cached data in Amazon ElastiCache for **Redis**, reducing query latency from an average of 200ms to an average of 40ms. Configured TTL to manage data expiration.Optimized **Kafka** partition and replica configurations, enhancing the speed of asynchronous message processing and eliminate traffic peaks.