Adrian HE

206-617-9601 | adrianlfc11@gmail.com |

EDUCATION

University of Washington — Seattle, WA
Master of Electrical Computer Engineering, GPA: 4.0/4.0 — *Sept. 2024 – May 2026*

Xi'an Jiaotong Liverpool University — Suzhou, CN
Bachelor of Engineering in Data Science, GPA: 3.62 — *Sept. 2020 – May 2024*

TECHNICAL SKILLS

Languages: Java, Python, SQL, HTML/CSS/JavaScript, R, TensorFlow, Matlab
Tools & Frameworks: Git/Github, PyTorch, Flask,SpringBoot, Django, React.js,Vue, Node.js
Databases: MySQL, Redis

RELATED EXPERIENCE

Chatterly| *Springboot + MyBatis + MySQL + Redis + Netty* — Oct 2024 – Dec 2024
A real-time messaging platform

- **Challenge:** Traditional polling-based messaging systems led to high server load and noticeable latency.
- **Solution:** Implemented a Netty-based long connection with Redis-based caching, reducing server query load and improving real-time communication performance.
- **Challenge:** Multi-device login resulted in session desynchronization, leading to inconsistent user experiences.
- **Solution:** Designed a Redis-based session management system to synchronize chat history and user relationships across devices seamlessly.
- **Challenge:** High-concurrency queries on user relationships impacted database performance.
- **Solution:** Utilized Redis caching for relationship data and integrated Redisson's RTTopic for real-time group notifications, improving scalability and reducing database pressure.

WORK EXPERIENCE

Software Engineer Intern — June 2023 – Aug 2023
Cosco Shipping — *Shanghai, China*

- **Project Overview:** Developed a cloud storage platform for C-end users. Features included user registration,user login, file upload, chunked upload, breakpoint resume, instant transfer, and online file preview (supporting text, images, videos, audio, Excel, Word, PDF, etc.), as well as file sharing functionalities.
- Recycle Bin & Admin Panel: Developed file restoration and permanent deletion features. Enhanced storage allocation and system settings management for 200+ users.
- Optimized File Uploads: Enabled instant file transfer via MD5 matching, asynchronous chunk merging, and video preview generation using FFmpeg, reducing upload time by 15%.
- Real-time Storage Monitoring: Utilized Redis caching to dynamically track user storage consumption.
- Hierarchical Directory Handling: Implemented recursive queries for multi-level directory structures.

Software Engineer Intern — June 2024 – Aug 2024
Bilibili Technology Co., Ltd-Live Stream Technology Group — *Shanghai, China*

- **High-Concurrency ID Generator:** Designed and implemented a distributed ID generation system with fault tolerance, efficiently handling concurrent requests. By preloading ID segments from MySQL and leveraging Golang's Goroutines and Channels, the system achieved seamless high-speed ID allocation, supporting over 6 million concurrent requests across multiple business units.
- **Database Optimization:** Extracted URL fields from JSON data, restructured table design, and implemented B+ tree indexing. Optimized search efficiency from $O(n)$ to $O(\log n)$ while ensuring transactional consistency for reliable data management.