

ADRIAN HE

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Education

University of Washington

Master of Electrical Computer Engineering, GPA: 4.0/4.0

Seattle, WA

Sept. 2024 – May 2026

Xi'an Jiaotong Liverpool University

Bachelor of Engineering in Data Science, GPA: 3.62

Suzhou, CN

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

- Developed a cross-platform messaging application with **real-time communication**, **offline messaging**, and **media file sharing**, ensuring seamless user experience across devices.
- Utilized **Redis** for caching, **Redisson RTpoic Pub/Sub** for distributed message delivery, and **Netty long connection** for real-time messaging and offline push notifications.
- Implemented **SQLite** for local message storage, reducing server load and improving query efficiency. The **Electron main process** facilitated backend-frontend communication, file caching, and media previews.
- Integrated an **AI-powered assistant** using OpenAI's API, leveraging **Apache HttpClient** for RESTful communication and **Bearer Token authentication** for security.
- Enhanced system performance with structured request handling, efficient session management, and local media caching, ensuring scalability under high traffic.

Video Sharing Platform| *Spring Cloud Microservices Architecture*

Dec 2024- Feb 2025

Full-stack development

- Built a **high-availability video sharing platform** using **Spring Cloud microservices**, supporting video management, user interaction, and admin control.
- Integrated **Nacos** for service discovery, enabling dynamic scaling and fault tolerance.
- Ensured data consistency across microservices by implementing **Seata** for distributed transactions.
- Optimized performance with **Redis** for real-time caching and asynchronous processing, handling high traffic efficiently.
- Migrated data from **MySQL** to **Elasticsearch**, building a **video search and recommendation system** that significantly improved search performance and content discoverability.

Work Experience

Software Engineer Intern

June 2023 – Aug 2023

Cosco Shipping

Shanghai, China

- Developed a **cloud storage platform** supporting file upload, instant transfer, breakpoint resume, and online preview for multiple formats (text, images, videos, audio, Office, PDF).
- Implemented **MD5-based instant transfer**, asynchronous chunk merging, and **FFmpeg** video preview generation, reducing file upload time by **15%**.
- Enhanced system performance with **Redis caching**, enabling real-time tracking of user storage consumption.
- Designed hierarchical directory structures with efficient **recursive queries**, improving file organization and retrieval.

Publications

Research Publication

Nov 2024

Robot Intelligence Technology and Applications 8

- Explored transfer learning for Alzheimer's Disease classification using VGG16-based feature extraction on MRI images.
- Evaluated SVM, Logistic Regression, and kNN classifiers, finding VGG16+LR most effective for distinguishing AD stages.
- Demonstrated the potential of deep learning in computer-aided AD diagnosis.
- Publication:** Springer Link