

Chih-Tao Lee

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EDUCATION

Master of Science in Computer Science , GPA 3.9 Khoury College of Computer Sciences Northeastern University Boston, MA Related Course: Algorithms, Computer Networking, Cloud Computing, Pattern Recognition and Computer Vision	2022 - 2024
Bachelor of Science in Engineering and System Science , GPA 3.9 College of Nuclear Science National Tsing Hua University Hsinchu, Taiwan	2012 - 2016

WORK EXPERIENCE

Full-Stack Software Engineer Internship , <i>AI Roboto Edu</i> , Pasadena, CA	May 2024 - Sep. 2024
<ul style="list-style-type: none">Developed APIs for client data integration using Spring Boot, while optimizing MySQL database queries to enhance performance, resulting in a 12% reduction in average request latencyBuilt an asynchronous state management system with Redux, ensuring seamless real-time synchronization with the server, which enhanced application responsiveness by 10%, even during slow network connectionsLeveraged Git and CI/CD pipelines to streamline development and deployment, accelerating release cycles, which improved overall project efficiencyImproved user experience and engagement by designing and deploying a highly responsive and visually appealing front-end UI using React, Material UI, and Tailwind, providing intuitive navigation and faster interaction	

PROJECTS

Real-Time Chat Application (GitHub: https://github.com/Jazzcort/Rust_RealTime_Chat)	Aug. 2024 - Oct. 2024
<ul style="list-style-type: none">Developed a high-performance, terminal-based real-time chat application in Rust, leveraging Tokio (async library) and Ratatui (TUI library) to ensure lightweight, memory-efficient operationEngineered an atomic broadcast system using channels and TCP streams, achieving concurrent message delivery to multiple usersMastered socket programming to build and maintain stable connections for data transmission across usersOptimized error recovery mechanisms, enhancing chat responsiveness for an improved user experience	
Music View (GitHub: https://github.com/Jazzcort/MusicView)	May 2024 - July 2024
<ul style="list-style-type: none">Led both front-end and back-end teams to successfully launch Music View by prioritizing tasks and optimizing workflows, resulting in a 30% increase in team productivity and project efficiencyDesigned a well-structured database schema in MongoDB to efficiently organize and manage user data, optimizing data retrieval and storage processes, resulting in a 30% reduction in query execution timeReduced server load by 55% by implementing the Tanstack Query library, which provided a front-end cache system to efficiently manage server state informationOrchestrated an AWS EC2 cluster with Kubernetes and Docker image to enable automatic scaling during peak traffic periods, ensuring zero downtime and uninterrupted service by efficiently distributing workloads and managing resources	
Rusdis (GitHub: https://github.com/Jazzcort/Rusdis)	May 2024 - Dec. 2024
<ul style="list-style-type: none">Developed a Redis-like in-memory key-value store, using Rust, focusing on high performance and safetyImplemented core features including SET, GET, and DEL commands with support for data persistence via append-only files (AOF) and periodic snapshotsDesigned and built a multi-threaded, asynchronous networking layer using Rust's Tokio framework for efficient client request handlingImplemented replication to synchronize data across multiple instances for high availability	

TECHNICAL SKILLS

Language	Rust, Python, Java, C, C++, C#, JavaScript/TypeScript, Go, Swift
Web Technologies	HTML, CSS, Node.js, Bootstrap, React.js, Express.js, Next.js, Tailwind, Actix, Spring Boot, Svelte
Databases	MongoDB, MySQL, PostgreSQL
Tools & Frameworks	Git, Docker, Unity, Android Studio, Kubernetes, AWS, Tauri