Jiaming Liu

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EXPERIENCE

Software Development Engineer Intern   Apr 2024 – Aug 2024
Microsoft   *Shanghai, China*
- Contribute to ⦿Microsoft/vscode-gradle project (**2.9 million+** downloads) by **redesigned system architecture** to consolidate the previous three separate processes (Task Server, Language Server, and Build Server) into a single unified process, reducing overhead. This integration significantly reduced system overhead, **cutting memory usage to less than 50% of the previous total**.
- Modified Gradle Daemon plugin display from Tooling API to **TypeScript** for improved performance and user experience in **VS Code**. Engaged in multiple sprints for iterative development and feature enhancements

Research Assistant (Software Development)   Jan 2024 – Mar 2024
University of Alberta | Under the supervision of Prof. Samer Adeeb   *Edmonton, Canada*
- Contribute to the development of **MecSimCalc**, an interactive web platform for creating and sharing computational tools, focused on both frontend **React.js + Typescript** and backend **Django** enhancements.
- Developing educational applications with advanced functionalities to meet various educational and professional demands, featuring integration with Gmail, Google Spreadsheets, and Canvas.
- Optimized user-configured **Docker** environments, enabling online provision, duplication, and saving of multiple environments and user-end settings.

Software Development Engineer Intern   June 2023 – Oct 2023
Ericsson   *Shanghai, China*
- Developed a cross-platform JSON log analysis web tool using **Vue3 + Typescript** for the frontend and **Django** for backend operations. This automation tool reduced the team's log processing time by around 90%.
- Enhanced user experience by deploying as an Electron client application and integrating **Echarts** for data visualization, leveraging Python for data extraction and PouchDB for browser database optimization.
- Contributed to the Ericsson 3GPP Innovation Project by developing a web system for global online protocol browsing, incorporating the **Haystack + Solr** search framework and Flexsearch for advanced search capabilities.
- Enhanced data management and user experience by deploying PostgreSQL on remote Linux servers using Docker and participating in both frontend and backend development with **Vue3** and **Django**.

EDUCATION

Simon Fraser University   Burnaby, Canada
M.S. in in Professional Computer Science   *Sept. 2024 – Apr. 2026*

University of California, Berkeley   Berkeley, United States
Exchange Student, Berkeley International Study Program (BISP), GPA: 3.73/4.0   *Aug. 2022 – May. 2023*

East China Normal University   Shanghai, China
B.S. in Software Engineering, Major GPA: 3.4/4.0   *Sept. 2020 – July. 2024*

PROJECTS

⦿ User Persona Analysis and Interaction System | *Langchain, Python, LLM, Streamlit*   Jan 2024 – Present
- Leverage **Langchain** and LLMs for analyzing social media posts, employing classification to define different chains for analysis across dimensions such as personality and emotional state, with a focus on quantitative scoring.
- Engineered the analysis framework to utilize **LLMs** for dynamic categorization, enabling tailored evaluations and insights into user personas through advanced computational linguistics techniques.
- Developed the interaction system by integrating user posts into the **Pinecone** vector database, employing the RAG architecture for enhancing query responses.

Document Management System | *Vue, Springboot, MySQL, Git*   Apr 2022 – July 2022
- Served as the team leader to conduct demand analysis and oversaw the project's progress.
- Grasped new concepts of HTTP protocols, Spring Boot framework, and Git, used Vue framework and Element-Plus to set up the Front-End Web Development Project; created a back-end database for the website using MySQL.
- Drafted the course project report, which ranked **1/30** of the class.