Jiaming Liu

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Experience

Software Development Engineer Intern Apr 2024 – Aug 2024
Microsoft *Shanghai, China*

- Contributed to the microsoft/vscode-gradle project (**3.1 millions+ downloads**) by **redesigning the system architecture**, consolidating the previous three separate Java processes (Task Server, Language Server, and Build Server) into a single unified process, **reducing memory usage by approximately 40%**, enabling its integration into the Microsoft/vscode-java-pack and used by millions of users.
- Enhanced the Gradle Daemon plugin display by migrating from the Tooling API to **TypeScript**, resulting in improved performance and user experience within **VS Code**. Participated in multiple sprints focused on iterative development, bug fixes, and feature enhancements.
- Contributed to the microsoft/build-server-for-gradle project by implementing a secure **named pipe** IPC method.

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 **Electron** with **Vue3** and **TypeScript** for the frontend, and **Django** for backend operations. Integrated **ECharts** for data visualization, utilized Python for data extraction, and optimized browser storage with **PouchDB**. This tool reduced the team's manual log processing time by approximately 90%.
- Contributed to Ericsson's 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 contributed to both frontend and backend development with **Vue3** and **Django**.

Education

Simon Fraser University Burnaby, Canada
M.S. 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 *Sept. 2020 – July. 2024*

Projects

User Persona Analysis and Interaction System | *Langchain, Python, LLM, Streamlit* Jan 2024 – June 2024

- 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.

Skills

Programming Languages: Python, Java, Typescript, SQL (Mysql), SwiftUI
Tools and Frameworks: Git, Vue3, React, Django, Node.js, Langchain, VS Code Extension API, ChatGPT