Zijun Zhang

- Phone - Portfolio - Email - Linkedin - Github

EDUCATION

The University of Melbourne **Melbourne, Victoria, Australia**
M.S. in Computer Science, WAM: H1 *Mar 2024 - Dec 2025*

The University of Melbourne **Melbourne, Victoria, Australia**
B.S. in Computing and Software Systems, WAM: H2A *Mar 2021 - Dec 2023*

TECHNICAL SKILLS

Programming Languages: Python, Java, JavaScript, TypeScript, Go, C++, R
Frameworks & Libraries: React, Next.js, Spring Boot, Express.js, Flask, PyTorch, Scikit-learn, Pandas, NumPy
Databases & Cloud Services: MongoDB, MySQL, Redis, AWS, Docker, Kubernetes
Tools & Methodologies: Git, Jira, Confluence, CI/CD Pipelines, Agile methodologies, Test-Driven Development

WORK EXPERIENCE

Software Engineer intern
Industrial and Commercial Bank of China, Melbourne, Australia *Dec 2023 - Feb 2024*

- Optimized internal data processing by refining SQL database queries and Redis caching, achieving a 20% reduction in transaction processing time and significantly improving system scalability.
- Redesigned the user interface with intuitive form design and real-time validation, which reduced error rates by 15% and enhanced user experience.
- Collaborated closely with a cross-functional team, demonstrating effective communication and teamwork by clearly articulating technical concepts during integration of new service modules, ensuring timely delivery.

Data Engineering and Testing Intern
Alibaba, Yunnan, China *Dec 2022 - Feb 2023*

- Applied critical analytical thinking to optimize supply chain data, developing a deep-learning model that significantly improved operational efficiency and reduced inventory costs by 10%.
- Conducted comprehensive code reviews using CI/CD tools across multiple analytics projects, identifying and resolving over 30 critical issues to enhance overall code quality and foster team collaboration.
- Developed and executed unit tests for data pipeline scripts, achieving 98% test coverage and eliminating processing errors, thereby ensuring the accuracy and reliability of analytical insights.

PROJECTS

- **Interview Copilot**, a web-based application enhancing interview performance through real-time speech-to-text transcription and AI-powered assistance. Built with React and integrating Deepgram and OpenAI's GPT-4 APIs, it features low-latency audio streaming via WebSocket, advanced text processing, and a responsive, theme-able interface with secure API key storage. GitHub
- **Prompt Optimizer**, a web application that refines user prompts for LLMs (GPT-4, Claude 3.5). Developed with Next.js 14 and Tailwind CSS, it offers real-time prompt optimization by integrating OpenAI and Anthropic APIs, secure API key storage, and an intuitive interface with dark mode support. GitHub
- **Melbourne Urban Mobility Insights Dashboard**, an interactive R Shiny application that analyzes Melbourne's pedestrian dynamics, public transport patterns, and road safety metrics. Using custom CSS and libraries like shinyjs and shinydashboard, it delivers responsive design, dynamic navigation, and detailed modal dialogs to enhance user interaction. GitHub
- **Distributed Collaborative Whiteboard**, a Java-based program enabling real-time, multi-user drawing through a robust client-server architecture. Developed with Java Swing, it offers diverse drawing tools, text insertion, comprehensive file operations, and custom command handling for user management and canvas synchronization. Github

RESEARCH

- **Textual Unlearning Weakens Adversarial Robustness in Fine-tuned LLMs**, currently investigating a novel "pseudo data poisoning" vulnerability by exploring how textual unlearning compromises adversarial robustness. Developing an experimental framework to evaluate unlearning techniques under black-box adversarial attacks using security metrics, aiming to provide critical insights into the real-world implications of machine unlearning.

EXTRACURRICULAR ACTIVITIES

- **Committee member** in Unimelb Blockchain Association - *Feb 2025 - Present*
- **Executive member** in Computing and Information Systems Students Association - *Feb 2022 - Feb 2023*