

# Chenhao Feng

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## EDUCATION

### Master of Software Engineering

Feb, 2024 - Present

The University of Melbourne

- Developing a specialised focus in Distributed Computing, and initiating research projects to explore innovative solutions
- Excelled in software requirement analysis and management coursework, applying Agile methodologies to analyse client needs and align development goals in team-based capstone projects with a 12-person scale

### Bachelor of Science

Feb 2021 - Dec 2023

The University of Melbourne

- Major in Computing and Software Systems, including Software Modelling and Design, IT Project, Computer Systems and Models of Computation
- Developed strong foundation in programming and algorithmic problem-solving through comprehensive coursework

## EXPERIENCE

### Robot Odyssey Game Capstone

Mar, 2025 - Present

Swordfish Computing

Melbourne, Australia

- Architected and implemented a complete Domain-Specific Language (DSL) and Virtual Machine system for robot programming, enabling intuitive C-like syntax for complex autonomous robot behaviours
- Built end-to-end compilation pipeline using C++ and modern parsing tools, transforming high-level robot code into optimised bytecode for seamless execution across Windows and Linux platforms
- Developed complete compilation pipeline with real-time error detection and meaningful diagnostic messages, significantly reducing debugging cycles for complex robot behaviours
- Integrated Unity3D game engine with custom VM to demonstrate real-time robot behaviours, creating an interactive environment for testing and showcasing autonomous robot programming capabilities

### Information Systems and Technology Internship

Nov, 2024 - Feb, 2025

Stable Software

Melbourne, Australia

- Collaborated in a frontend team to build a safety monitoring web app, independently developing image processing and annotation features with React.js and Material-UI, including custom tools for labelling and classifying safety incidents in warehouse environments
- Led initial project setup and deployment automation to Azure, defining code standards for a 3-person team and implementing real-time configuration capabilities for non-technical users to adjust detection parameters
- Designed RESTful APIs and database architecture to support incident data management and user authentication, ensuring seamless integration between frontend components and backend services

## TECHNICAL SKILLS

- Programming: Proficient in C, Java, Python, and JavaScript for full-stack development
- Web Technologies: React.js, Node.js, RESTful APIs, PostgreSQL, with experience in scalable system design
- Cloud & Tools: AWS, Azure, Git, Docker, and Agile methodologies for collaborative development
- Soft Skills: Strong communication, requirements analysis, and team leadership in cross-functional environments

## RELEVANT PROJECT WORK

### Social Media Data Analysis Platform

- Established distributed data processing platform analysing 4.5M+ social media posts from Mastodon, Reddit, and Bluesky, executing sentiment analysis and trend visualisation to support academic research on social media behaviour
- Deployed scalable Kubernetes infrastructure with event-driven architecture using Fission functions and Redis queues, enabling real-time data harvesting and processing across multiple social platforms
- Designed RESTful API with data validation pipelines and created interactive dashboards using Kibana, providing researchers with filtered queries and cross-platform analytics capabilities