

# Jiangye Song

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## PROFILE

Proactive Software Engineer with a Master's in AI and specialized experience in Generative AI integration (RAG, MCP) and Full Stack Development. Proven track record of reducing enterprise workflow timelines by over 90% through custom automation and tool-use agents. Have strong experience in Next.js, PostgreSQL/pgvector, and Python.

## SKILLS

- **Languages:** TypeScript, JavaScript, Python, SQL, C#, Java.
- **Frontend:** Next.js (App Router), React, Svelte, Tailwind CSS, Material UI.
- **Backend & AI:** Node.js, PostgreSQL, pgvector, upstash, Model Context Protocol (MCP), RAG, LLMs (chat/embedding) APIs.
- **Infrastructure & Tools:** Docker, AWS, Vercel, Git, n8n, Zapier.

## WORK EXPERIENCE

### Web Developer | Tipload

Mar 2026 – Present

- Developed a Multimodal AI Toolkit Server
  - Designed an automated validation system using Gemini's multimodal AI to analyze driver-submitted images for "unexpected waste" and "overloaded bin" identification.
  - Eliminate 80% of manual administrative review for drivers' complaints, estimated to reduce surcharge processing time by over 90%.
- Designed and implemented an Intelligent Agentic Booking Agent
  - Designed and implemented a modular agent capable of RAG-based knowledge retrieval, dynamic cart calculation, guest booking creation, and order management.
  - Automated around 70% of routine customer inquiries, moving users from initial discovery to confirmed booking without human intervention.
- Architected Scalable Marketing & Lead Engagement Automations
  - Designed multiple n8n workflows (e.g., Meta Ads, Service Seeking, Hipages, etc.).
  - Doubled the exposure and increased lead conversion rates by around 35% by contacting leads from hours to seconds through real-time LLM and n8n.

### Software Engineer Intern | AusBiz Consulting

Aug 2025 – Jan 2026

- Built a Coupon Management MCP Server (Model Context Protocol)
  - Designed a specialized AI agent interface allowing LLMs to autonomously query and validate coupon databases.
  - Reduced manual retrieval and validation time by 95% (cutting a 2-week manual workflow down to 0.5 days).
- Implemented a Clinical Audit Platform
  - Built a vector search enabled CMS using pgvector and Cohere to manage embeddings for clinical documents.
  - Replaced a fragile, engineer-dependent maintenance script with a robust UI, eliminating engineering overhead for content updates and enabling non-technical staff to manage audit criteria instantly.
- Developed AI-receptionist, a SaaS platform for chat bot Solution
  - Built a modular RAG-based chat architecture featuring real-time calendar integration, mail tools, and voice mode.
  - Standardized the deployment codebase, enabling the company to deliver customized, fully functional AI receptionists to clients within a 6-week turnaround guarantee.

## ACADEMIC PROJECTS

### Real-Time Retinal Vessel Segmentation Using LDM Res-Net | University of New South Wales

Sept 2024 – Nov 2024

- Developed a lightweight Deep Learning model for medical imaging using Python and PyTorch.
- Achieved high segmentation accuracy with only 0.96M parameters, optimizing the model for deployment on edge devices with limited compute power.
- Integrated dual multiscale residual blocks to enhance feature extraction from low-contrast retinal images.

### Emotion Analytics Using Tweets | University of New South Wales

May 2024 - Aug 2024

- Engineered a refined NLP pipeline to classify emotions in English Twitter datasets.
- Fine-tuned BERT and LSTM models, implementing advanced tokenization and data augmentation techniques to handle noisy, informal social media text.
- Delivered detailed performance metrics and visualization reports to project sponsors.

## EDUCATION

### Master of Information Technology | University of New South Wales

Feb 2024 - Feb 2025

- Specialist in Artificial Intelligence, Distinction Average (WAM 76.25).
- High Distinctions in Artificial Intelligence (90 HD), Engineering Project Management (89 HD).
- Key Coursework in Solving Modern Programming Problems with Rust (78 D), IT Project (81 D).

### Bachelor of Computer Science | MONASH University

Mar 2021 - Dec 2023

- Specialist in Advanced Computer Science, Distinction Average (WAM 72.0).
- High Distinctions in Artificial Intelligence (81 HD), Fundamentals of C++ (80 HD), Games Programming (84 HD).
- Key coursework in Object Oriented Design (79 D), Parallel Computing (70 D), Programming Paradigms (76 D).

## EXTRACURRICULAR ACTIVITIES

### Personal Websites

May 2024 - Present

- Designed and maintained multiple personal websites using Vercel and WordPress to experiment with web technologies.
- Designed custom themes using PHP, CSS, and JavaScript based on Diaspora theme.
- Developed web-based games using Next.js