





Yiming Ren

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Full-stack AI Engineer Summary

- 8-month Commercial Experience in Software Development
- Experienced in Full-Stack & AI-Driven Development (React, Spring Boot, FastAPI, PyTorch)
- Hands-on experience through academic and personal projects in web systems, distributed computing, and deep learning
- Previously interned at Yanfeng Automotive Interiors, focusing on data validation and testing tools for steering-system datasets
- Passionate, curious, and detail-oriented developer with strong problem-solving skills and commitment to continuous learning

Education

The University of Sydney

Master of Software Engineering

Expected Graduation: Dec 2025

Bachelor of Software Engineering (Honours, WAM: 70)

Aug 2020 – Jul 2024

Work Experience

Software Engineer Intern – Yanfeng Automotive Interiors
Shanghai, China

Jun 2023 – Feb 2024

Developed embedded Python modules and test scripts for in-vehicle infotainment/HMI systems, collaborating with cross-functional hardware and UX teams.

In-school Projects

Bookmania ([Link](#)) | Full-stack Developer

Mar – Jun 2022

Django REST, React/Redux, Bootstrap — Created the bookstore e-commerce stack, covering user auth, search, cart, and checkout flows.

“King of Bots” Game Platform ([Link](#)) | Back-end Lead
2023

Mar – Jun

Spring Boot, Vue.js, MySQL, WebSocket — Developed real-time matchmaking and bot-execution microservices with WebSocket push to the front end.

ECG ↔ PPG Reconstruction | Lead ML Engineer, Capstone

Aug – Nov 2023

TensorFlow/Keras, Python — Trained CNN-LSTM + attention models to reconstruct 12-lead ECG signals from single-channel PPG.

Cartoonopia Web App ([Link](#)) | Full-stack Developer

Aug – Nov 2023

Next.js, Node/Express, MongoDB, JWT — Built a MERN dashboard with REST endpoints, role-based authentication, and a character-comparison view.

X-ray Bone-Shadow Suppression ([Link](#)) | Thesis Project

2024

PyTorch, DDPM / DDIM / Elucidated Diffusion — Built three diffusion pipelines to remove rib and clavicle shadows from chest X-rays.

LLM ED Agent ([Link](#)) | Full-stack Developer

Aug – Nov 2024

FastAPI, React, Docker, PostgreSQL, OpenAI API — Built an AI-assisted teaching platform for students and teachers to share materials, prepare lessons, and communicate via GPT-powered Q&A. Adopted GPT-4 for Q&A automation, reducing manual workload by 40%.

Low-Light Enhancement for Surgical Videos ([Link](#)) | Thesis Project

2025

PyTorch, BasicSR, DDPM, 3D CNN — Developed a video enhancement pipeline using diffusion models tailored for low-light surgical footage; explored temporal consistency via 3D convolutions and attention-based architectures. Improved PSNR by 15% compared to baseline DDPM model.

Extracurricular

Passionate about AI, gaming, and music. Active participant in developer communities and hackathons. Enjoy exploring emerging technologies such as generative AI, real-time rendering, and cloud automation.

Work Eligibility & Languages

Work Rights: Student Visa holder, eligible for full-time work under 485 Graduate Visa after Dec 2025.

Languages: English (professional proficiency), Mandarin (native)

Programming Languages

Python: FastAPI, Django, TensorFlow, PyTorch, NumPy, Pandas

JavaScript / TypeScript: React, Vue 3, Next.js, Node.js, Express, Pinia, Redux, Axios

Java: Spring Boot, Maven, Hibernate, JUnit

Databases: PostgreSQL, MySQL, MongoDB, Redis

Version Control: Git / GitHub / Bitbucket (pull requests, code review workflow)

Other Tools: Docker, Bash scripting, HTML5/CSS3, WebGL/Three.js, Linux, Gradle, Jira, Figma, Canva

Skills

Machine Learning & AI

Experienced in developing and training deep learning models (CNN, LSTM, Transformer, Diffusion) for low-light and video enhancement tasks.

Proficient in PyTorch, TensorFlow, data preprocessing, GPU-based training, and LLM integration using OpenAI API, LangChain, and Hugging Face.

Full-Stack Development

Builds full-stack web systems with React / Vue (frontend) and FastAPI / Django / Spring Boot (backend).

Implements RESTful APIs, JWT/OAuth2 authentication, PostgreSQL / MongoDB integration, and deploys via Docker, Vercel, and AWS.

Testing & CI/CD

Writes unit, integration, and E2E tests (Pytest, JUnit, React Testing Library); integrates static analysis and CI pipelines with GitHub Actions and Bitbucket CI.

Software Engineering & Collaboration

Practices Agile/Scrum; experienced with Jira, Trello, and Confluence.

Strong communication, analytical thinking, and teamwork skills with a focus on scalable, user-centric software.