

# Xiangyu Zheng

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Sydney, Australia

## PROFESSIONAL SUMMARY

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Full Stack Engineer specializing in AI-powered applications and LLM integration. Experienced in building end-to-end web systems combining React/Next.js frontends with Node.js backends and intelligent features such as conversational agents, recommendation systems, and real-time translation. Strong in designing scalable API architectures, integrating AI services (OpenAI, Azure AI), and developing user-focused platforms with practical business impact.

## SKILLS

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### AI & LLM Systems

OpenAI API, Azure AI Translator

Prompt Engineering, Multi-step LLM Workflows

Conversational Systems, Context-aware Memory Design

### Full Stack Development

React.js, Next.js (v15), TypeScript, JavaScript (ES6+)

Node.js, Express.js, RESTful APIs

Authentication (JWT), API Design, State Management

### Databases & Cloud

MongoDB, MySQL, PostgreSQL

AWS S3 (file storage integration), API-based cloud services

### Tools & Workflow

Git, GitHub, Jira, Notion, Agile/Scrum

Linux, Shell scripting basics

## PROJECT EXPERIENCE

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### UNSW AI Academic Advisor

Full Stack AI System | Feb 2025 – Jun 2025

- Designed and developed an AI-powered academic advising platform supporting course planning, degree requirement validation, and policy guidance.
- Built a full-stack architecture using **React (frontend), Node.js/Express (backend), and MongoDB**, enabling scalable user data and recommendation storage.
- Designed a **pseudo-agent architecture combining LLM reasoning, user context memory, and rule-based constraints** to deliver personalized academic recommendations.
- Implemented conversational AI using **OpenAI API and Google Generative AI**, enabling real-time interaction with students.
- Developed **multi-step prompt workflows** for handling complex queries such as prerequisite validation and course path planning.
- Implemented **JWT-based authentication and role-based dashboards** for students, administrators, and program managers.
- Optimized frontend performance using **Vite and responsive UI design**, improving cross-device usability.

IFA Translator — Software Engineering Intern

Team Project (7 members) | Jan 2025 – May 2025

- Developed a full-stack translation platform supporting **real-time speech, text, image, and document translation**.
- Built frontend components using **React, Next.js, and Chakra UI**, ensuring responsive and user-friendly interfaces.
- Integrated **Azure AI Translator API** to enable multilingual translation across multiple input formats.
- Designed backend services for **user session management, translation logs, and subscription workflows** using Node.js and MongoDB.
- Contributed to **end-to-end testing, feature validation, and deployment preparation** in an Agile environment.

## Jobpin AI (AI-Powered Job Search Platform) — Software Engineering Intern

Sydney, Australia | Jul 2025 – Sep 2025

- Developed intelligent job-matching features for an AI-powered recruitment platform.
- Designed an **AI-driven resume analysis workflow using OpenAI API with prompt chaining and contextual reasoning**, enabling personalized job recommendations.
- Built responsive UI components using **React and Next.js**, improving user experience across devices.
- Implemented scalable **RESTful APIs with Node.js and Express**, handling candidate profiles and application data.
- Integrated **AWS S3 for secure file storage**, supporting resume uploads and retrieval.
- Collaborated in Agile workflows using **GitHub and Jira**, contributing to testing, debugging, and feature iteration.

## EDUCATION

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University of New South Wales (UNSW)    *Sydney, Australia*

**Master of Artificial Intelligence and Data Science**    2023 – 2025

**Relevant Coursework:** Machine Learning, Natural Language Processing, Deep Learning, Big Data Analytics

Southwest Jiaotong University (SWJTU)    *Chengdu, China*

**Bachelor of Materials Science and Engineering**    2019 – 2023

Professional Year Program (JR Academy)    *Australia*    2024 – 2025

Focused on industry communication, software development simulation, Agile teamwork, and employability skills

## ADDITIONAL EXPERIENCE

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Western Legend BBQ — **Operations Assistant**    *Aug 2023- Aug 2024*    Sydney

- Managed digital presence including website, TikTok, Instagram, and Google Reviews
- Increased Google rating from **3.2 to 4.7**, significantly improving brand reputation
- Contributed to winning **2024 Best BBQ Restaurant (Bayside Council)**
- Executed marketing strategies and analyzed customer feedback to improve engagement

## CORE STRENGTHS

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- ◆ End-to-end full stack development with AI integration
- ◆ Practical experience building AI-powered web applications
- ◆ Strong understanding of LLM-based system design and workflows
- ◆ Collaborative team player with Agile development experience