

Junming (Jeremiah) Xing

jrmh.xing@gmail.com | Sydney, Australia | <https://i.jrmh.dev/>

Professional Experience

Research Assistant (Software Development)

March, 2024 – April, 2025

The Australian National University, School of Computing

Sydney, Australia

- Developed a machine learning module training platform for early cancer detection; improved XGBoost model performance by 14% on F1 score using SMOTE oversampling and Tomek Link undersampling to handle limited, imbalanced cancer training data.
- Implemented backend services using **Flask**, asynchronous task management with **Celery** and **RabbitMQ**; designed and implemented frontend using **React** with **Typescript**.

Software Engineering Academic Tutor

July, 2023 – December, 2023

The Australian National University

Canberra, Australia

- Guided and mentored student teams through complex group projects; marked assignments and exams.
- Delivered practical insights about containerization, agile development, microservices and CI/CD.

Software Engineer Intern

July, 2023 – November, 2023

UnicornShift

Canberra, Australia

- Implemented frontend components using **React**; built backend services with **Node.js** and integrated with **GraphQL** for efficient data querying and realtime update.
- Managed cloud infrastructure on Google Cloud Platform, such as event-driven serverless computing with Pub/Sub-triggered Cloud Functions.

Personal Project

BusTub – Relational Database

May, 2025

Implemented core components of a tiny disk-based relational database in **C++ 17**, including a B+ Tree index, LRU-K buffer manager, query execution engine, and MVCC-compliant concurrency control.

Education

The Australian National University

Canberra, Australia

Bachelor of Advanced Computing (Honours) | Systems and Architectures

July, 2022 – July, 2024

Shandong University

Shandong, China

Bachelor of Engineering | Computer Science and Technology

2020 – 2024

Skills

Languages: C/C++, Python, Typescript, Node.js, Java

Frameworks: Spring, Flask, React, Angular

Others: GCP, AWS, Docker, PostgreSQL, Rabbitmq, GraphQL, RESTful API