

Jesse Liu

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Professional Summary

Master of Information Technology graduate with Distinction from UNSW, specialising in **web development and API engineering**. Experienced in building and optimizing scalable **TypeScript and Node.js** applications with React front-end integration, with RESTful API design, PostgreSQL performance tuning, and AWS-based deployments. Passionate about developing robust systems that enhance user experience and support business growth. Hands-on with **SQL/NoSQL databases** in **AWS**, with experience creating API documentation using **Swagger** and **Postman**. **Adaptable and collaborative**, with the ability to quickly learn new technologies and ready to contribute to industry projects

Technical Skills

Programming Languages: Python, TypeScript, JavaScript, Java, Rust, HTML5, CSS3

Web & Frameworks: React, Node.js, Flask, Tailwind, Ant Design

Databases & Data Processing: PostgreSQL, MySQL, Spark, Hadoop, Pandas, NumPy

APIs & Integration: RESTful APIs, GraphQL, Swagger, Postman, OAuth2, JWT, API Key Management, SaaS Integration

Cloud & Tools: AWS S3/ DynamoDB (Certified Cloud Practitioner), Git/GitHub, Postman, JIRA, Scrapy, Docker

Testing: Unit & Integration Testing (Jest, Cypress, Playwright), Selenium, BeautifulSoup

Education

Master of Information Technology

Sep 2023 - Sep 2024

The University of New South Wales, Sydney

Distinction average. *Special interest in: Data Science and Engineering, Web Front/Back-End Programming, Scalable Software Architecture, API Development*

Bachelor of Science in Computer Science

Sep 2020 - Sep 2023

The University of New South Wales, Sydney

Distinction average. *Key learning areas included: Big Data Management, Data Structures and Algorithms, O-O Design & Programming*

University Project

Design and Development of a Movie Search Website

Feb 2023 – May 2023

The University of New South Wales, Sydney

- Objective:** The project aimed to design and develop LuckyMovie, a movie search and recommendation website that enables users to search for movies, receive recommendations, and interact through chat features. The focus was on implementing a full-stack solution using a structured software development lifecycle.
- Tools:** Python, Flask, MySQL, Docker, Postman, JavaScript, HTML/CSS, Jira, GitHub, GitHub Action
- Duties:** As the team leader, I was responsible for coordinating development efforts and leading the backend development. I designed and implemented the database schema using MySQL, developed the Flask-based backend, and integrated APIs for search and recommendation functionalities.
- Outcome:** By the end of the project, we successfully developed a fully functional and responsive movie search website with account login, movie recommendations, internal chat, and external sharing features. We presented our project findings in a final report and received positive feedback on the implementation.
- Result:** Obtained High Distinction for this project. This experience enhanced my full-stack development, API design, database management, and leadership skills.

Employment History

Information Technology Assistant

Sep 2025 – Nov 2025

Southern Institute of Early Learning & Leadership Pty Ltd, Sydney, Australia

- Provided technical support by troubleshooting hardware and software issues, including printers, Wi-Fi connectivity, computer/laptop faults, and Microsoft Office (Word, Excel, PowerPoint) usage
- Explained internal system workflows to users from diverse backgrounds and resolved various service requests efficiently
- Developed a Python script to convert Word-formatted questions into Moodle GIFT format, improving efficiency and reducing manual formatting workload

TypeScript Backend Developer

Mar 2025 – July 2025

Dixson Technology Services Pty Ltd (Switchboard Cloud), Sydney, Australia

- Developed and maintained backend services for an integrated supply chain platform using TypeScript
- Developed API client modules to call external GraphQL and RESTful endpoints, transform response payloads into our internal data schemas, and return standardized results—using OAuth, JWT and API Key authentication
- Built and maintained internal tools to streamline data reporting, leveraging Metabase and PostgreSQL for efficient query and visualization workflows and backups to AWS S3 for long-term archival
- Created and executed automated unit tests using Jest to ensure code reliability and minimize production bugs
- Collaborated closely with cross-functional teams in an agile environment to deliver scalable backend solutions and improve system interoperability
- Troubleshoot API performance bottlenecks and contributed to architectural improvements, enhancing system responsiveness and maintainability

Full stack Engineer Intern

Mar 2025 – July 2025

TIDYTEDDY PTY LTD, Sydney, Australia

- Optimized a custom web crawler in Python (Scrapy), increasing data by approximately 136% to gather agent names, phone numbers, emails, and job titles from every real-estate agency site across Sydney
- Debugged and enhanced the company website’s front-end, resolving critical UI issues and rolling out fully responsive mobile layouts across multiple pages
- Designed and implemented a backend management dashboard with a user-friendly UI and database integrations, improving workflows

Software Engineer Intern

Dec 2021 – Mar 2022

Crown Bridge Group, Shenzhen, China

- Successfully developed and maintained a highly efficient Office Automation (OA) system, improving workflow productivity by 30%
- Built a secure and scalable Network-Attached Storage (NAS) server, enabling secure and easy file access across 10+ devices
- Developed a Java application for public document notifications, ensuring 99% timely updates
- Troubleshoot system issues and improved software performance through debugging and optimizations
- Collaborated with 5+ cross-functional teams to enhance software functionalities and resolve user issues

Technical Support Intern

Jul 2019 – Aug 2019

SJEC Corporation, Suzhou, China

- Installed, configured, and troubleshoot operating systems, ensuring 99% system uptime and stability
- Diagnosed hardware and software faults, reducing system downtime by 40% through proactive maintenance
- Implemented and maintained strict permission management protocols, restricting unauthorized access to critical systems, improving security compliance by 25%
- Assisted 20+ employees with technical issues, ensuring a smooth and efficient IT support process

Personal Attributes

- Problem-Solving – Diagnosed and resolved multiple issues during my internship
- Time Management – Balanced university, internships, and part-time jobs, maintaining a Distinction average while delivering multiple software projects on time
- Communication & Teamwork – Led backend development for a movie search website, coordinating with different teams to ensure smooth integration and deployment
- Adaptability – Quickly learned React, Flask, and Cypress, applying them effectively in projects and internships

References

Available upon request