

[Patrick Profile](https://patrickdevs.vercel.app/)

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Education

Western Sydney University - Bachelor of Computer Science (Advanced) - GPA 6.5/7

- **Major:** AI, **Minor:** Cloud Computing
- **Relevant Coursework:** Data Structures and Algorithms, System Programming, Cloud Computing Architecture, Artificial Intelligence, Machine Learning and Data Science, Cyber and Information Security.
- **Awards:** Dean’s Merit List 2022, 2023 - Vice-Chancellor's Academic Excellence Undergraduate Scholarships

Parramatta, NSW
Graduated Jan 2025

Work Experience

Tata Consultancy Services - Launch Pad Startup - Creators Club
Software Engineer, Mentor

Parramatta, NSW
March 2024 - Present

- Working on Chrome Extension project in partnership with Tata Consultancy Services to deliver customised AI functionalities using different models and RAG techniques.
- Developed SkillPies GitHub course and mentoring new members on web-related technologies.
- Currently serving as forefront full-stack web developer and team leader for club projects.

Western Sydney University - SSTaRs Staff Roster | Zoom AI Summariser
Full-stack Developer Intern

Kingswood, NSW
Feb 2024 - Nov 2024

- Migrated the existing file-based process to an interactive web application that involves shift planning and presentation using React.js, Node.js, and MongoDB.
- Dynamically account for staff preferences: sick leaves, shift preferences; public and university holidays, etc.
- Allow users to add their shifts to different calendar apps, and export to csv and PDF formats.

Western Sydney University - Peer Assisted Study Sessions
Maths Facilitator

Parramatta, NSW
Feb 2023 - June 2023

- Helped peers in understanding statistics using R Studio and Python.
- Hosted weekly in-class and remote sessions, analysed students’ results and prepared tailored materials.
- On average 30% improvement compared to previous semesters and 75% achieved Distinction and above.

Research Experience

Western Sydney University, School of Medicine - GPT for Health
Software Engineer, Project Manager | Supervisor: Assoc. Prof. Brahm Marjadi @ WSU

Remote
July 2024 - Present

- Developed a scalable, AI-powered system using Next.js, React.js, TypeScript and SQLite to simulate realistic family scenarios for medical students. Generated diverse family backgrounds and life events representing Greater Western Sydney’s demographics to enhance student engagement and learning outcomes for “Health Across the Lifespan” workshops.
- Implemented a user-friendly chat interface for students to interact with simulated patients and track their progress. Deployed the application on AWS with ELB and auto-scaling, ensuring efficient scalability and performance.
- Researching students’ responses to LLMs and comparing those with real interactions.

Projects

Mini-SHRDLU — C++

Feb 2023 - Jun 2023

- Developed a solver for a simplified version of the SHRDLU board game, which involves moving blocks to achieve specified goals on a grid. The project implements various algorithms to solve the game under different conditions, including single goals, disjunctive goals, conjunctive goals, and the A* search algorithm.
- Utilised C++ for its performance and standard library support for data structures like vectors, priority queues, and unordered sets.

Book Catalog — Web app

Jan 2021 - May 2021

- Categorising books based on genres, favourites, comments, etc.
- Used NodeJS, Express and JWT for the Backend, and MongoDB for the database.
- Used Bootstrap, JS and JQuery for Frontend.
- Heroku for deployment, Electron for cross-platform apps

Skills

Technical: C/C++, Python, JavaScript/TypeScript, Java, PHP, SQL, AWS, Docker

Web Framework/Libraries: React.js, Next.js, Node.js, Express, FastAPI, TailwindCSS

AI/ML: TensorFlow, Scikit-learn, OpenAI, Gemini, Langchain, LangGraph, Langsmith

Interpersonal: Team-working, communication, problem-solving, 2-year work experience as a Sales Consultant at Swarovski and Myer

Language: English, Vietnamese

Certifications

- AWS Academy Graduate - AWS Academy Cloud Architecting
- AWS Academy Graduate - AWS Academy Cloud Foundations
- JavaScript Algorithms and Data Structures
- Artificial Intelligence Foundations: Neural Networks