Patrick Profile
https://patrickdevs.vercel.app/

PATRICK NGUYEN

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Education

Western Sydney University - *Bachelor of Computer Science (Advanced) - GPA 6.5/7* - *Degree*   *Parramatta, NSW*
- **Major:** AI, **Minor:** Cloud Computing   *Graduated*
- **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

Work Experience

Qrisks   *Broachbeach, QLD*
Junior Full-stack Developer - Contract   *Feb 2025 - Present*
- Developing and maintaining the Qrisks platform quantifying information risk using Open FAIR.
- Engaged in CI/CD pipeline, managing AWS resources both backend and frontend with NextJS and FastAPI.

Tata Consultancy Services - Launch Pad Startup - Creators Club   *Parramatta, North Sydney, NSW*
Software Engineer Intern, Club Mentor, VP   *March 2024 - Present*
- Co-found *NaviFi* - An AI-powered equity research and community platform in partnership with Tata Consultancy Services.
- Developed SkillPies GitHub course and mentoring new members on web-related technologies.

Western Sydney University - ITDS Department   *Kingswood, NSW*
Full-stack Developer Intern   *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   *Parramatta, NSW*
Maths Facilitator   *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   *Remote*
Software Engineer, Project Manager | Supervisor: Assoc. Prof. Brahm Marjadi @ WSU   *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 - June 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.

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, **2.5-year work experience** as a Sales Consultant at Swarovski,Myer and David Jones
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