VAI KRISHNAN

FINAL-YEAR SOFTWARE ENGINEERING STUDENT

Perth, Western Australia | 0450 955 918 | vaikrish8@gmail.com | Australian citizen

PROFILE

Final-year Software Engineering student at the University of Western Australia with experience in software development, API integration, data analysis and AI-enabled information processing. Developed practical skills through university projects and a software development internship, including working in agile teams and solving real-world problems. Keen to use technology to improve services and outcomes for Western Australians.

TECHNICAL SKILLS

Software development	Python, Java, C, JavaScript, TypeScript, Rust; React, Three.js, PixiJS; RESTful APIs; object-oriented design
Data and AI	Data cleaning and analysis; OCR; LLM-assisted information extraction; AI search algorithms; SciPy numerical simulation; neural text-to-speech
Tools and delivery	WebAssembly, Web Workers, IndexedDB; Git, GitHub Actions; Linux/UNIX; agile workflows; requirements, testing and deployment; Playwright

EDUCATION

Bachelor of Engineering (Honours), *Expected 2026*
Software Engineering | The University of Western Australia

Relevant study: Object-Oriented Software Engineering; Algorithms, Agents and Artificial Intelligence; Computer Networks; Operating Systems; Agile Web Development; Software Requirements and Project Management; Computational Data Structures.

Perth Modern School – Year 12

EXPERIENCE

Software Developer Intern | Rhombuz.io *Jan-Mar 2026*

- Contributed to a media monitoring platform that identified and analysed emerging public safety incidents from social and broadcast media sources.
- Integrated and tested Twitter/X API workflows for keyword tracking, trend discovery and location-based relevance filtering.
- Used OCR and large language model tools to extract and analyse information from video and text sources.
- Worked remotely in a fast-paced development team, shared progress, responded to feedback and adjusted work as requirements changed.

Barista | Dome Cafe *Sep 2024-Present*

- Provided friendly, accurate service in a busy café while maintaining quality under pressure.
- Balanced customer orders, team priorities and university commitments effectively.
- Communicated clearly with customers and colleagues to contribute reliably to the team.

Bike Hire Operator | Mobius Engineering Pty Ltd *Apr 2021-Jun 2024*

- Serviced and repaired bicycles, diagnosing faults and completing work safely and efficiently.
- Advised customers on suitable bikes and equipment based on their needs and supported day-to-day sales.

PROJECTS

Search Atlas | Interactive pathfinding application GitHub

- Built an interactive web application that visualises A*, Dijkstra, breadth-first and greedy best-first search on editable grids with weighted terrain and obstacles.
- Implemented the search engine and binary heap in TypeScript, using a Web Worker to keep the interface responsive and support step-by-step replay and algorithm comparison.
- Tested correctness against a separate Bellman-Ford implementation on 1,000 seeded grids and added automated browser, keyboard and accessibility checks.

Gateway | Orbital dynamics and scientific visualisation GitHub

- Built an interactive application for exploring the Solar System and investigating orbital motion, using a Rust/WebAssembly numerical engine and a React/Three.js interface.
- Implemented adaptive integration, periodic-orbit calculations and stable/unstable manifolds for an idealised three-body model, with adjustable parameters and saved experiments.
- Tested four benchmark orbits against a separate SciPy implementation and added numerical regression tests, browser checks and automated deployment through GitHub Actions.

Hush | Reading and neural narration application GitHub

- Built a responsive EPUB and PDF reader in React and TypeScript with adjustable typography, bookmarks, saved reading positions and offline access.
- Integrated on-device neural text-to-speech using Kokoro and a WebAssembly worker, with sentence highlighting, voice selection and playback controls.
- Used IndexedDB and versioned caches to retain books and narration assets locally; added automated tests covering reading, offline reopening and real neural audio generation.

Selected University Projects

- Developed RESTful web applications using Python-based frameworks and applied software design and API development principles.
- Developed AI search agents using heuristic and decision-making algorithms to solve complex scenarios.
- Worked in agile teams to take software from requirements through development, testing and deployment using Git.

COMMUNITY EXPERIENCE

Volunteer and Fundraising Participant | Cambodia *2019*

- Helped restore school classrooms and supported English-language activities.

ADDITIONAL INFORMATION

- Australian citizen based in Perth, Western Australia.
- Available for full-time graduate employment after degree completion in 2026.