

# RAYAAN RAJABALLY

Final year software engineering student with hands-on experience across diverse projects and a collaborative mindset. Enthusiastic about tackling new challenges and contributing to impactful work.

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## EDUCATION

### Bachelor of Software Engineering (Honours)

Feb 2023 – Nov 2026

University of Auckland

- GPA - 8.0/9.0
- Courses in DSA, Software Design, OS, OOP, DB Systems, CompSys, SQA, Networks, Security, AI/ML and more

## INTERESTS

- Passionate about building AI-powered products that are accessible and solve real problems for real people.
- Enjoy creative thinking, working across disciplines, and shipping things that are well-designed and purposeful.

## WORK EXPERIENCE

### FRAMECAD

Nov 2025 – Present

Software Engineering Intern

- Built an AI-powered translation pipeline for legacy Windows RC files using Python and LLM APIs, with structured validation and controlled deployment
- Automated Steelwise CAD optimisation testing with Python and TestComplete, running parameter sweeps and analysing structural trade-offs
- Designed Microsoft Fabric pipelines (PySpark, dataflows, lakehouse) to ingest and model financial data from SAP and Salesforce
- Modelled dimensional and time-series schemas for revenue, churn, and forecasting in Fabric semantic models
- Delivered Power BI and Fabric dashboards surfacing operational and financial insights across teams

*Key learnings: Cross-functional collaboration on production systems, rapid adoption of enterprise tooling, and translating engineering work into clear business outcomes.*

### AssetDash (Remote, Miami) - Overseas Experience

Dec 2022 – Present

Support Engineer

*AssetDash is a privacy-first crypto and multi-asset portfolio tracker, supporting 150+ blockchains, exchanges, and brokerages.*

- Replaced email support with an automated 24/7 Intercom workflow, cutting response times from 24 hrs to under 2 hrs
- Analysed user behaviour and usage patterns using SQL to inform product decisions
- Collaborated with product and engineering teams to refine UI features and improve app experience
- Onboarded new staff and provided system training to integrate them into the team
- Built a Slack bot to auto-post support issues and manage tickets via slash commands

*Key learnings: Working across time zones in an international team with exposure to global product lines and stakeholders.*

### Scratchpad (Royal Oak)

Aug 2022 – Dec 2022

Admin

- Managed scheduling, promotional materials, and finance workflow operations

## PROJECTS

### Celestial Shift

Python, Flask, Flutter

- Automated composite image generation showing time and lighting changes across fixed scenes
- Built multiple rendering algorithms (Slices, Vortex, Starburst, Circles) in Python with custom masking and gradient logic
- Created a Flask API to merge time-lapse images, reducing manual Photoshop work by 80%
- Built a Flutter desktop app for image selection, parameter tuning, and live preview
- Packaged the full system as a Windows executable using PyInstaller and Inno Setup

*Key learnings: Full-stack development with Python and Flutter, image processing APIs, and packaging desktop tools for distribution.*

## tracksy

React Native, TypeScript, Expo, PostHog, Sentry

- Started as a personal habit tracker, evolved into a production-ready cross-platform mobile app
- Built with React Native and Expo featuring goal tracking, streaks, and progress charts
- Designed a local-first data model for fast, reliable offline usage
- Integrated PostHog for behavioural analytics and Sentry for real-time crash reporting
- Preparing for App Store and Play Store release via Expo's build and deployment pipeline
- Refined onboarding flows and UX patterns through repeated iteration to improve clarity and long-term retention

*Key learnings: Taking an app from idea to production - local-first architecture, analytics integration, and shipping polished software.*

## Autonomous Robot Navigation

Python, scikit-learn, MLP, Jetson Nano

- Collected and labelled a custom image dataset of traffic signs and signals directly from the robot's on-board camera
- Trained and tuned an MLP model for real-time recognition of 5 sign classes (stop, speed, green light, yellow light, sheep)
- Deployed the model on a Jetson Nano-powered robot, enabling fully autonomous operation with no remote input
- Robot responded correctly to each sign: stopping, adjusting speed, and holding position based on live predictions

*Key learnings: End-to-end ML on real hardware - self-collected data, model training and optimisation, and embedded deployment for autonomous control.*

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## ACHIEVEMENTS

### YouSee Soft Competition - Won 1st place

Full-stack Android e-commerce app recognised for functionality, polish, and UX. Featured account creation, cart management, review system, and real-time Firebase sync. Voted best project by peers and teaching staff.

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## COMMUNITY

### Photography - [rayaanrajabally.com](http://rayaanrajabally.com)

- Photographed local community and sports events, blending creativity and technical skill
- Led photography sessions for younger audiences, teaching visual storytelling through the camera

### Tutoring

- Tutor maths and coding one-on-one, through holiday programmes, and real-world problem solving sessions
- Run sessions for students from intermediate through to university level across Auckland

### Community Engagement

- Organised and led youth camps, creative workshops, and team activities focused on connection and collaboration

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## SKILLS

### Technical

- **Languages:** Python, Java, C, MATLAB, JavaScript/TypeScript, SQL
- **Frameworks & Libraries:** React Native, Flutter, Flask, React, Expo, Android
- **Tools & Platforms:** Git/GitHub, Firebase, AWS EC2, Figma, Power BI, Postman
- **Design & Other:** HTML/CSS, XML, UI/UX, REST APIs, Agile

### Soft Skills

Team Leadership	Problem Solving	Mentoring	Initiative	Collaboration
Communication	Creativity	Organisation	Teamwork	Adaptability

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## HOBBIES

Photography, Bouldering, Running, Personal Projects, Gaming, Table Tennis, Fitness