

### Profile Summary

- **Full-Stack Engineer** with a wealth of experience in developing user-friendly, responsive, and scalable web applications, leveraging expertise in peer-to-peer and low-level distributed computing. Contributed to various open-source projects.
- Expertise spanning from high-performance web applications and decentralized APIs within fast-paced environments, with contributions during all phases of the **Software Development Life Cycle** from requirements analysis to maintenance.
- Extensive technical skill set, with mastery in **TypeScript**, **Node**, and **Rust**, focusing on technologies like blockchain, **RESTful** APIs and **micro-service architecture** to enhance data integrity and system scalability. Experienced in creating front-end and back-end website architecture, mobile-first design, and integrating databases.
- Effective collaborator, well-versed in Agile methodologies, aligning **cross-functional teams**, including UI/UX designers, product designers, software engineers and managers, to design new features and enhance current systems.

### Technical Skills

**Programming Languages:** JavaScript, TypeScript, Rust, Node.js, Ruby, HTML5, CSS3, SASS, Kotlin, SwiftUI

**Frameworks & Libraries:** React, Vue.js, Next.js, LitElement, Express

**Databases:** PostgreSQL MySQL, Firebase, Couchbase, SQLite

**Cloud Services, DevOps & Dev. Tools:** Docker, AWS EC2, Github Actions, Digital Ocean, Heroku, Git, Storybook

**Domain Expertise:** RESTful APIs, Mobile Apps, Data Visualization, SVG Animation, Building design systems, Figma to code

### Work Experience

#### Inkibra Ltd., Biketerra Ltd., Ivy Oracle Ltd.

Remote

##### Freelance Rust Developer

Dec. 2024 - Present (Temp Contract)

- Planned and built out a **market-making trading system** in **Rust**. Used Tokio and the actor model pattern to create a highly concurrent **multi-DEX**, **multi-currency** bot with risk management/hedging mechanisms and Grafana dashboard.
- Planned and built out a **Solana** indexer in **Rust**. Pulled data from an **RPC** endpoint and decoded, pushed to various **Kafka** queues in order to be serviced with highly concurrent **async micro-services** in **Tokio**. Implemented **continuous integration** and **deployment to AWS EC2** implemented with a multi-container **Docker compose** manifest and **Github Actions** workflows.
- Added front-end features to a flagship **mobile** fitness app, including: a workout challenge carousel, **AI** chat prompt window, and fitness routine program list, thus helping to engage and on-board new users via social sharing.
- Re-built an **iOS** only app for the **Android** platform by re-writing core plugins, thereby helping to increase the app's potential market reach by **over 100%** (based on worldwide OS market share figures).
- Re-built an **asynchronous bluetooth** connection managing app in **Tauri** using Rust. Re-wrote the code to handle multiple connections without blocking, using the actor model pattern, implementing **concurrency** for connection lifecycle management to improve connection latency over the initial JavaScript implementation by **over 500ms**.

#### Neighbourhoods Ltd.

Remote

##### TypeScript/Rust Developer

Apr. 2023 - Aug. 2024

- Implemented the Neighbourhoods Launcher, a hub for distributed applets, utilizing LitElement and **TypeScript**, with **OOP** & **Component-Driven Development** to facilitate application sharing within and across communities.
- Developed and rigorously evaluated features for the Holochain-based peer-to-peer **API** using **Rust**, incorporating **WASM compilation** and **Unit Testing rules**. Contributed to the construction of the *Feed applet*, that showcased the Sensemaker engine - a framework that facilitates the generation of social metadata for communities.
- Developed a design system comprising **Web Components** and a **Storybook**, collaborating with the design team to ensure visual consistency and maintainability in the Neighbourhoods Launcher, utilizing **semantic HTML** and **CSS**, using encapsulation, schema-based form validation, and enhancing component **integration testing** using Vitest.

- Collaborated within a cross-functional team including Product Designer, Tech Lead, and software engineers, employing **Agile** practices to effectively deliver software using **Kanban**. **Presented** to stakeholders, leveraging storytelling and video demonstrations, and adapting messages to audiences.

## y5 Labs Ltd. [↗](#)

Hamilton, New Zealand

### Full Stack Developer

Apr. 2022 - July 2022

- Designed and implemented a component-based **React** UI for testing new features, improving development efficiency and reducing time-to-market.
- Evaluated and analyzed complex business problems to implement effective solutions. Coordinated with the team (often remotely) on the best approaches to assigned tasks. Included:
  - building **REST** APIs using **JavaScript** and **Node/Express**
  - incorporating concurrency through **Web Workers** to optimize asynchronous programming and error handling
  - effectively serving **JSON** data to deliver efficient e-commerce solutions to a major AU/NZ.

## Freelance

Auckland, New Zealand

### Full Stack Developer, Aunt Jenny Ltd. [↗](#)

Feb. 2021 - Apr. 2022

- Engineered a stock management and fulfillment **Shopify** app, using **Next.js**, **Node.js** and integrating **webhooks** to automate inventory updates and streamline order processing, significantly enhancing operational efficiency and reducing processing time by 10 minutes per order.
- Updated the store-front template using **Liquid** so that live stock data could be fed through from the backend **GraphQL API** thereby increasing customer satisfaction. Added a webhook for automated customer email updates to reduce the number of manual stock emails by around 50%.

## Education

### Launch School [↗](#)

Remote

#### Software Engineering Trainee

Jan. 2019 - Feb. 2021

- Crafted clean, straightforward, and thoroughly tested code for multiple projects using **Ruby** and **JavaScript**.

### University of Bath - Mathematics BSc

2006 - 2007 (Changed degree)

### University of Sheffield - Economics and Politics BA

(2:1) 2009 -2012

## Software Projects

### Planitt [↗](#)

Nov. 2023 - Present

- Built an **interactive SVG visualization** for personal user habits thus enhancing user cognition by leveraging **d3.js (data driven documents)** tree layouts.
- Optimized the UI using Chrome Dev Tools by analysis of heap allocation snapshots to **remove data leaks**, resulting in **smoother performance** via an average heap allocation **decrease of 20%**.
- Implemented Rust-based algorithms within the multi-platform **Tauri** application, and leveraging Rust patterns like **ownership**, **borrowing**, and **concurrency** to enhance performance, achieving a peak response time of under **50ms**.