

Max Abbot

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PROFESSIONAL EXPERIENCE

Parallel42 Christchurch, NZ

Data Engineer

Jun 2025 – Present

- Sole developer on a NZ consumer lender's payment platform (~1,600 active customers, ~\$8M loan book, ~\$90k in direct debits a week). Took it over half-working, fixed the direct-debit retry cycle and the payment tracking between the bank and Mambu, and built or rebuilt its reconciliation, audit and daily-checklist screens so the ops team can see where every payment stands, which built the business's confidence in it and cut much of the manual fixing.
- Built and maintain 23 independently deployed AWS Lambda services for the lender that keep Mambu and HubSpot in sync, generate customer documents (statements, settlement and variation letters), send arrears reminders, create payment links, validate bank accounts, flag faulty loan applications and produce an affordability workbook for every credit assessment (30 to 60 a day).
- Added re-runs and refinance support to the lender's broker credit-decisioning API, which makes about 720 decisions a month.
- Helped move the lender off its old systems and onto Mambu and HubSpot.
- Build the tools the ops team uses every day, working with them directly to figure out what they need.

Data Engineering Intern

Nov 2023 – Jun 2025

- Built automated data pipelines in Google Cloud Platform to collect, process, and present data in Snowflake, designed for simple SaaS deployment using Terraform.
- Developed and maintained data models across Snowflake, Azure SQL, and Synapse, ensuring accuracy and consistency for reporting and analysis.
- Automated ETL workflows with Azure Function Apps and Data Factory, improving reliability and reducing manual maintenance.
- Worked with regional councils, private businesses, and partner consultancies to deliver tailored data solutions.
- Used a range of cloud technologies (Azure, GCP, AWS) for integration, storage, and deployment.

Alliance Group Ltd Christchurch, NZ

Business Intelligence Developer Intern

Nov 2022 – Feb 2023

- Developed dimensional models for new data analytics framework in dbt and Snowflake.
- Participated in code reviews and worked in a development team using the Agile framework.
- Created Jinja macros in dbt to assist and accelerate development.
- Wrote wiki articles for common issues and setup guides.

SELECTED PROJECTS

Broker CRM · *in daily use at a mortgage brokerage*

My dad's brokerage uses it every day to track about 500 loans worth around \$120M. It imports their XPlan export and warns them before fixed rates and interest-only periods end. Built with Tauri, SvelteKit and SQLite.

Home lab on NixOS · *personal*

Home server rebuilt on NixOS and reachable only over Tailscale. Nightly backups go to Backblaze B2, a Raspberry Pi checks them, and I've tested a restore.

NixOS workstations · *public: github.com/maxabbot/nix*

One Nix flake for my desktop, two laptops and a test VM. Each machine picks the parts it needs instead of copying another's config.

SKILLS

- **Languages:** Python, TypeScript, SQL, Bash
- **Backend & Data:** FastAPI, PostgreSQL, DynamoDB, Snowflake, dbt, Power BI
- **Cloud:** AWS (Lambda, Step Functions, SQS, ECS, App Runner, S3), Azure (Functions, Data Factory, Synapse), GCP (BigQuery)
- **Frontend:** React, SvelteKit
- **Integrations:** HubSpot, Mambu, REST APIs, webhooks
- **Infrastructure & Tooling:** Terraform / OpenTofu, Docker, GitHub Actions, NixOS, Claude Code

EDUCATION

University of Canterbury *Christchurch, NZ*

Bachelor of Engineering with Honours, Mechatronics Engineering

Feb 2021 – June 2025

- 2022 Tohu Kahurangi recipient for Athletics.
- Final year project involved working as part of a team to produce an end-to-end system for monitoring fatigue and crash detection for truck drivers.
- Other group projects included developing a fitness tracker, programming an FPGA calculator, optimising a C FEM model to run on hardware, and a robotics competition.
- Relevant skills covered: Python, C, embedded software and computer systems, deep/machine learning, statistical analysis.
- Member of UC IEEE, UC TronSoc, UC Amateur Sports and UC Women in Tech.

OUTSIDE WORK

- Most of my spare time goes on the gym, basketball, gigs and gaming.
- 2021 and 2022 NZ U20 Discus Champion.
- 2022 and 2025 Canterbury Premier Division Basketball.