

Alex Korban

Professional experience

Author, open source developer (2011–present)

[view code](#)

Interspersed with other engagements listed below, full-time at times. Self-published books about PostgreSQL, Elm, and C++. Participated in open source Elm community: created tools, learning resources, and wrote about Elm. Recorded several video courses about Ruby, PostgreSQL, Elm, and Heroku for Pluralsight (an online learning platform). My books and courses have been read and watched by thousands of developers. See *Publications* and *Open Source* sections below for details.

Lead engineer — Cogo (2021–2023)

Led a remote-first team of 3-5 developers that created Business Carbon Manager, a web app integrated with Xero API and Cogo's internal carbon footprint API. Delivered the initial version of the product within a tight timeframe, followed by several feature releases, also on time. Previously, was part of a team that successfully delivered the Carbon Footprint API product in 6 months (also on time). This product is in use by 500K+ customers of NatWest (a major UK bank) and other banks.

Led the introduction of Elixir/Phoenix in the organisation, contributed to engineering-wide processes and architecture solutions such as structuring of software systems across teams and post hoc evaluation of major engineering initiatives.

Tech: Elixir, Phoenix, LiveView, Node, JavaScript, Express, Ramda, Tailwind, AWS (ECS, Lambda, Cognito, Aurora, SES, SQS, API Gateway, CloudWatch, CloudFront), PostgreSQL, Redis, Docker.

Software consultant — Power Trip (2019–2021)

[view code](#)

Developed microservice APIs for calculating weather adjustments during EV route planning, and for recording loyalty scheme data for points issuers and consumers in a ledger-like setup with features like balance transfer and transaction reversal. Created the company website with a data-driven EV guide and headless CMS integration for blog content.

Tech: Node, JavaScript, Express, Elm, PostgreSQL, Redis, AWS (EC2), Netlify.

Technical co-founder, CTO — Cloudscape (2013–2017)

[view frontend](#)

[view backend](#)

Created a product to provide productivity analytics and geospatial tracking for the heavy construction industry. The solution consisted of a web frontend, a hybrid mobile application

plus several services on the backend. Took the product from concept to initial customer uptake (on highway construction projects in Australia) as a sole developer. Later, led a team of 3 developers to continue developing the solution. The system collected millions of data points per month, with real-time dashboards and reporting. The company continues to operate today.

Tech: Node, Express, PostgreSQL, Postgis, JavaScript/CoffeeScript, Ramda, Redux, JSVerify (property-based tests), Heroku, AWS S3, Cordova (iOS/Android apps), jQuery Mobile, Mapbox.

Software consultant (2010–2015)

Trimble Navigation: Delivered a mobile web app to provide construction site supervisors with near real-time visualisation of site activity such as cut/fill volumes and compaction coverage. Delivered a web app allowing landfill operators to monitor density of material in landfills.

BigEars: Developed a web application for audio clip playback and transcription to allow transcribers to process large volumes of clips quickly.

Tech: Ruby, Ruby on Rails, JavaScript/CoffeeScript, Angular, C#, ASP.NET, AWS (EC2, S3), Google Maps API, D3.js, PostgreSQL, MySQL.

Founder, developer — Prime Requirements (2010)

[view code](#)

Attempted to create a SaaS to help business analysts manage requirements. Couldn't find an enterprise marketing approach and pivoted into provision of education materials for BAs.

Tech: Ruby, Ruby on Rails, JavaScript/CoffeeScript, PostgreSQL, Heroku.

Founder, developer — OnlineChecklists (2010)

[view code](#)

Created a SaaS for managing business compliance checklists. Didn't find a product-market fit.

Tech: Ruby, Ruby on Rails, JavaScript/CoffeeScript, PostgreSQL, Heroku.

Senior full-stack engineer — LINT (2009)

Delivered a web application for GPS-based fleet tracking in a compressed timeframe.

Tech: Ruby, Ruby on Rails, PostgreSQL, Heroku, Google Maps API.

Senior software engineer — Precision Tracking (2008–2009)

Worked on a fleet tracking solution with PostgreSQL databases containing over a billion records, improved the development and testing process, deployed a monitoring system.

Tech: C++, STL, Boost, PostgreSQL.

Software engineer — Trimble Navigation (2006–2008)

Developed embedded software for control and guidance of earth-moving machines.

Tech: C++, STL, Boost, Windows CE.

Software consultant (2005–2008)

Precision Tracking: Contributed to a GPS tracking system for fertiliser spreading trucks, including creating drawing tools for defining farm and field boundaries.

Pacific Simulators: Contributed to a unique system for an airplane piloting simulator, creating graphical controls for cockpit displays, a GUI generator, and an audio subsystem.

Tech: C++, STL, Boost.

Software engineer — Opmatrix (2003–2006)

Developed the client application for the sales automation product on a new mobile platform (Pocket PC/Windows Mobile). Mentored a junior developer.

Tech: C++, STL, Boost, Windows Mobile, SQLite, Ruby.

Online presence

[Work portfolio](#)

[Pluralsight author page](#)

[korban.net](#)

[lobste.rs](#)

Open source

[Elmstatic](#) - a static site generator for Elm

[pgdebug](#) - CTE and subquery debugging tool for Postgres

[json2elm](#) - generator for Elm JSON decoders/encoders

[snap_assert](#) - instant snapshot testing inside Elixir `ex_unit` tests

[Elm Catalog](#) - a resource to help Elm developers find packages and tools

[elm-ui patterns](#) - showcase for elm-ui, a UI framework for Elm

More code examples can be found on my [GitHub profile](#).

Publications

Wrote and self-published a number of books on software development:

- ▶ elm-ui: The CSS Escape Plan, 2021
- ▶ Practical Elm, 2018
- ▶ PostgreSQL: Time and Temporal Data, 2017
- ▶ C++ Rocks (a series of five books), 2011-2014

Produced a number of video courses for Pluralsight:

- ▶ Running Production Applications on Heroku, 2020
- ▶ Object-oriented Ruby Fundamentals, 2020
- ▶ Building Real World Applications with Elm, 2018
- ▶ PostgreSQL: Time and Temporal Data, 2017
- ▶ Getting Started with the Mapbox JS API, 2014
- ▶ C++11 Language Features, 2013
- ▶ Ruby Fundamentals, 2013

Qualifications

Bachelor of Science — University of Canterbury, New Zealand

Major in Computer Science

Contact

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