Chris Bailey
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Summary

A pragmatic software engineer and generalist problem solver with a breadth of experience building and maintaining performant, distributed, and reliable systems.

Passionate about the Erlang/Elixir ecosystem, interesting (isomorphic) solutions to common problems (i.e., Svelte, Tailwind), and writing simple, maintainable, and *composable* code.

Website

https://cbailey.co.uk

Professional Experience

Senior Software Engineer at Vetspire; Remote, United States (April 2021–Current)

> Fullstack feature development using Elixir, Absinthe, Oban on the backend; React and Apollo on the frontend.

Software Engineer, Consultant at Erlang Solutions; London, England (Aug 2018–Apr 2021)

> Consulted for a small innovation lab at an international metal distributor *(10 months):*
> - Backend feature development using Elixir, Absinthe, RabbitMQ.
> - Pair programming, tutoring, and mentoring client's developers. Introducing and teaching common Elixir patterns and good practices.
> - Led multiple feature squads focusing on refactoring brittle, synchronous workflows into resilient, asynchronous workflows by fully leveraging OTP, or where appropriate, RabbitMQ.
> - Led effort to refactor a tightly coupled monolith into small and independently deployable applications within a single Elixir umbrella application, leveraging multiple release targets for different deployment strategies.

> Built MVP of internal certification and examination app *(3 months):*
> - End-to-end delivery of an MVP certification and examination web app to allow Erlang Solutions to deliver Erlang/Elixir certifications remotely in light of the COVID-19 pandemic using Elixir, Phoenix on the backend; Stimulus.js, and TailwindCSS on the frontend.

Consulted for the European branch of a global mobility startup working with multidisciplinary product teams *(1.5 years)*:

- Fullstack feature development on two projects using Elixir, Absinthe, Phoenix on the backend; Ember.js and Apollo on the frontend. Worked closely with external stakeholders to translate product requirements into actionable work for engineers.
- Supported production environments, troubleshot product launches, and deployed several times a day into a Kubernetes cluster.
- Implemented an authorization and permission management microservice in Elixir, which allowed access-control to be described using a custom Lisp-like DSL atop an entity graph backed by Postgres.
- Implemented an abstraction layer on top of Ecto, which allowed us to subscribe to database events and publish them to third parties.
- Owned end-to-end delivery of a proof of concept product to support client pitches; worked closely with a product owner and UX designer to bring their ideas to a working demo on a short deadline.

Developing PoC for a large payment processor in the United Kingdom *(3 months)*:

- Scaled payment gateway throughput from 1000s of requests per second to 100,000s of requests per second based on [this paper titled 'The Demarcation Protocol'](), leveraging distributed Erlang/OTP.

Intern Fullstack Engineer at ionCube; Canterbury, England (July 2016–July 2017)

Fullstack feature development on a DevOps-*aaS* app: [ioncube24.com](). PHP (Phalcon), NodeJS, C, C++ on the backend; AngularJS on the frontend.

Education & Training

Erlang Solutions–Erlang and OTP Certification Training

University of Kent, Canterbury–1st Class Honours (4.0 GPA):

Strong focus on Artificial Intelligence (Natural Computation) and Erlang/Elixir; produced an Erlang⇒JavaScript compiler for my final year research project.

Notable electives included *Operating Systems*, *Compilers & Interpreters*, *3D Graphics Programming*, and *Functional & Concurrent Programming*.