Josh Barr

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UX Engineer

- I'm a qualified graphic designer, a technology leader, and guitarist
- I believe in accessible, sensible user experiences
- I'm motivated by collaborating with great people & making an impact at scale

Qualifications & skills

- Bachelor of Design (Hons, 1st Class, Massey Scholar)
- Hands-on experience evolving software architecture at a $20bn enterprise
- Crafting user interfaces in React, vanilla JS, and plain old HTML.
- Influencing change at a high level – working with executive stakeholders to set the technical direction for critical software
- Working on high-traffic APIs in compliance-conscious industries
- Designing solutions with standard AWS building blocks. Lambda, Kinesis, S3, SNS/SQS, Dynamo and API Gateway
- Line management – hiring, training and conducting reviews
- Experience as an open-source contributor to Wagtail, a popular content management system.
- Developing in TypeScript, Python, C#, Node.js & React

The highlights so far

- Launching the developer docs, design system, and authentication for Stedi
- Transforming software delivery at Xero by leading the adoption of LaunchDarkly for feature management. The impact of this has been independently verified by Forrester to have delivered a 245% ROI and several million dollars in productivity gains.
- Shipping new navigation at Xero – "the biggest change to Xero in years"
- Modernising Xero's API Gateway, delivering Sign In With Xero
- Contributing to Xero's Shell.js, a microfrontend orchestrator allowing teams to independently release user interfaces.
- Growing the front-end technical practice at Springload
- Delivering a rich OpenType editor for Klim Type Foundry
- Helping improve health outcomes in South Africa with the Wagtail CMS core team in Cape Town, 2016
- Encouraging 30,000 young people to get out and vote, with On The Fence
- Designing in-flight touchscreen interfaces for Air New Zealand
- Best Award – Outstanding, Student Graphic Design for Akzidenz Baby!, 2009

Employment History

UX Engineer, Stedi
Apr 2021 – Feb 2023

- Established Stedi's Design Language System, for shared UI components across all applications
- In collaboration with Stedi's Recruiter, worked to make our front-end hiring process more inclusive.
- Migrated Stedi's Developer Docs and API Reference from a third-party host to Next.js, including a custom renderer for OpenAPI Specifications.
- Built a CLI and dynamo-backed API for publishing versioned OpenAPI specifications from teams' repositories

- Consolidated our frontend web applications – previously deployed on subdomains – behind a single domain
- Key contributor and code owner for Stedi's Authentication library. Worked with the AWS team to reduce Amplify's bundle size.
- Front-end ops: configured e2e tests with Playwright and Cypress, built deployment pipelines in Github Actions, ensured security compliance with custom reporting tooling on top of AWS SecurityHub, Infrastructure-as-code with AWS CDK.

Lead Portfolio Architect, Xero

Dec 2019 – Mar 2021

- Coordinated across the 80-person Ecosystem group to design the architecture for Xero's transactional app store, including contract management and partner onboarding
- Wrote architectural whitepapers for senior leadership outlining important team and technology changes required for the business to meet its goals.
- Led a time-critical regulatory compliance project to shift WorkflowMax and Xero Practice Manager behind our OAuth2 Gateway
- Led the modernisation of developer.xero.com, from a bespoke application to open-source standard building blocks.
- Core contributor to Xero's global architecture principles and architecture strategy
- Upheld and improved the Ecosystem's security posture, through collaboration with Xero Security and external Security Advisors

Solution Architect, Xero

July 2018 – Nov 2019

- Technical mentor and advisor for key initiatives in the Xero Ecosystem:
- Modernised our API Gateway, delivered Single Sign On, Informed Consent, OAuth 2
- Guided the creation of a new app marketplace for Xero, migrating from static content to a dynamic CMS, enabling a signed in experience.
- Led the adoption of LaunchDarkly for feature management across Xero
- Laid the foundations for secure single page applications with Xero's microfrontend solution – Shell.js
- Facilitator for API Community of Practice, building consensus on the right way to build APIs.

Frontend Architect, Xero

Nov 2016 - July 2018

- Architected and implemented new navigation for Xero's 18 customer-facing web applications.
- Created libraries for dev teams to implement OpenId Connect authentication in their web applications.
- Replaced a bespoke frontend build tool with Webpack, saving 100 hours/month in CI server time. This changed enabled almost ~1m lines of frontend JS to be statically analysed for the first time.
- Technical lead for a pilot programme aiming to internationalise Xero's web applications
- Advocate for containerisation and pipelines as code, using Jenkins, Docker and ECS.

Technical Director, Springload

Nov 2015 - Nov 2016

Together with one other technical director, I was responsible for running the technical practice at Springload. Over 2014-2016, we transformed Springload's technical culture, initiating continuous integration, continuous deployment, and unit testing practices. We standardised environments and moved our client workloads on to AWS.

Designer, GoodWorld

Aug 2014 - Feb 2015

Working with the Wellington-based development team and Washington-based business team, I contributed to GoodWorld's user experience, leading to a successful funding round and Fast Company's most innovative non-profits to watch in 2016.

Front-end director, Springload

Dec 2013 - Nov 2015

Responsible for growing and maintaining quality of the Springload front-end development team, ensuring environments and tooling are appropriate, conducting interviews and reviews, working on strategy and system architecture for Springload's clients. Key projects include the redevelopment of kiwibank.co.nz, NZTA's front-end pattern library, Klim Type Foundry.

Senior front-end developer, Springload

Jan 2013 - Dec 2013

I worked to expand Springload's front-end practice and clear technical debt. I introduced a formal methodology for CSS (BEM) and command-line tooling such as Gulp & Webpack. Key projects include developing the Forsyth Barr Investment Insights app and contributing to the frontend of Kiwibank Home Hunter.

Designer, Springload

Nov 2011 - Jan 2013

Responsible for user experience and design on my allocated projects, under the direction of Andy Hovey. Highlights include redesigning the New Zealand Red Cross website, launching the first responsive bank homepage for Kiwibank, as well as projects for RealMe and NZ Post.

Interactive Designer, Designworks Wellington

July 2011 – October 2011 (fixed term)

I took on a contract at designworks, helping execute in-store components of the NZ Post retail transformation project. Responsibilities included client liaison, briefing contract designers and developers, prototyping, design and illustration.

Visiting Tutor, Massey University

February 2011 - June 2011 (fixed term)

Responsibilities included tutoring 300-level graphic design, planning and delivery of screen-based interactive design curriculum, facilitating studio practice and critique sessions.

Designer, Designworks Wellington

October 2009 – February 2010

I joined Designworks as an intern during my final year of study. I worked on the refresh of the Ministry for Culture and Heritage (design and front-end code), in-flight entertainment systems for Air New Zealand and Cathay Pacific, motion graphics for Telecom, and re–fit of a post office in Jin Jang, Malaysia.

Education

Massey University Wellington, 2006-2009

I studied Visual Communication Design, with a focus on typography, identity, motion graphics and advertising. For my final year project, I explored the relationship between digital and physical publication. During this time I worked as a freelance web developer.

References available on request