

Josh Richards - Software Engineer

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Skills

- **Languages** = JavaScript, TypeScript, C#, Python, Go, HTML, CSS, PostgreSQL
- **Frameworks** = React, Next.js, Astro, Tailwind, Node.js, .NET, Express.js, React Native
- **Technologies/Concepts** = AWS, Git, Agile, REST, WebSocket, Redux, CI/CD, TeamCity, GitHub Actions, Docker, Firebase

Work Experience

[Xero - Accounting Software for Small Businesses - Software Engineer](#) - 2020/Present

[React | TypeScript | C# | ASP.NET | AWS | Agile | Git | CI/CD | Alerting/Monitoring]

- **A core contributor on Xero's modernized Invoicing platform**, driving the **sunset of the legacy system** and ensuring a smooth migration for over **one million small businesses**.
- **Delivered several features** both individually and collaboratively, contributing to a **full-stack, scalable web app** serving **hundreds of thousands of daily users**, with a strong focus on user experience, performance, and engineering quality.
- **Designed a recovery strategy** that reduced mean time to recovery (MTTR) for the Invoicing frontend from **30 minutes to 30 seconds**. Collaborated with my team's Lead Engineer to implement the approach and secured buy-in from the wider team.
- **Won the People's Choice Award in Xero's biannual hackathon** for modernizing a beloved unicorn easter egg from Classic Invoicing and bringing it into the new platform—an update celebrated by customers and Xero employees alike.
- **Established synthetic monitoring** using New Relic for Xero's modernized Invoicing platform, enabling uptime metrics and page load performance tracking in production.
- **Developed and debugged in Xero's legacy C# monolith**, navigating a complex codebase with over **two million lines of code** and multiple interdependent deployables.
- **Mentored and onboarded multiple new engineers** into the team, including **buddying a graduate**, helping them ramp up quickly, and creating a supportive learning environment.
- **Joined Xero through the Intern and Graduate programs**, gaining diverse technical experience across **five departments**.

[CR Automation - Automation Engineering Firm - Software Engineer Intern](#) - 2019/2020

[C# | .NET | SQL Server] I was tasked with building a Business Intelligence Agent that received data from a data source (e.g. PLC, computer, or database) and sent it to multiple SQL Server databases or files using various communication protocols concurrently.

Personal Projects

[Ten Thousand Pixels](#) - JavaScript | Golang | WebSocket | Redis | Vercel | Fly.io (2024) ([GitHub](#) / [Reddit Post](#))

A real-time collaborative pixel art canvas where users can draw pixels and see live updates. It has gained over **20,000 unique visitors**, **100 GitHub stars**, and during its peak the site received over **30,000 pixel updates every 10 minutes**. I encountered challenges with complex frontend interactions and WebSocket concurrency at peak traffic.

[Album Listen List](#) - React | TypeScript | Tailwind | Firebase | Spotify | Vercel (2023) ([Reddit Post](#))

A place where Spotify users can aggregate all of the albums they plan to listen to, rate their favourites, and share their list with friends. It has over **300 monthly active users** and **14,000 unique visitors**.

Education

Graduated with a **Bachelor of Science** in **Computer Science** from Victoria University of Wellington (2021)

Interests

I stay active by bouldering a couple of times a week at my local gym, and I play the piano as a creative outlet.