Fraser Brooks M.Sci   Full Stack JavaScript Developer

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Senior JavaScript developer specialising in Angular with a wealth of experience from working at a digital agency.

I lead front-end development across two teams, one delivering an enterprise web application for a FTSE 250 client, the other serving a high-growth startup where I have had the privilege of working on the pre-launch MVP and then scaling up to thousands of users and over £1 million in revenue, giving me experience across the product lifecycle.

I have deep expertise as a front-end developer but over the past year I've been moving towards a full-stack role building out applications with Express.js and contributing to .NET development around our back-end APIs.

Skills

- Collaborating with designers, back-end developers, data engineers, product owners and stakeholders to ensure continuous delivery of high-quality software through agile development processes.

- Leveraging **Angular, NgRx**, and **RxJS** to build enterprise-scale SPAs that remain performant, secure, resilient, and maintainable across time while integrating with both **REST** and **GraphQL** APIs.

- Building with **Express.js** and **server-side rendering** to maximise **SEO** performance.

- Using W3C compliant **HTML, CSS, & JS** to deliver cross-browser support, responsive design, and accessibility for all of our users.

- Unit testing, integration testing, and **E2E testing** with **Jest**/**Karma**/**Playwright**.

- Application instrumentation and monitoring via **Azure**, **Application Insights**, and **OpenTelemetry**.

- Setting up **Google Analytics** with **GTM** to monitor user behaviour and generate insights for the business.

- Maintaining a highly reusable and customisable **component library** for use across the whole business.

- Integrating with **CMS** (headless & traditional), as well as payments, messaging, and authentication libraries.

- Inventing novel solutions to complex problems that sit outside the typical frameworks when the need arises.

Professional Experience

Rockpool Digital (3 years)

Rockpool is a digital agency delivering bespoke web applications for some of the UK's biggest brands.

Senior Front-End Developer . . . . Sep 2023 - Present

Lead two teams of front-end developers, overseeing architecture and best practices across our applications. Chair team meetings and mentor and support developers through regular 1:1s. Assist stakeholders and product owners in shaping the product roadmaps, advising on technical scope and risk mitigation.

Key contributions:

Created a server-side-rendered, Angular SPA; integrating with Umbraco's headless CMS via GraphQL and enabling multivariate testing through integration with configcat-js feature flag service. This enabled the growth team to improve SEO performance and double the click-through rate to our quote engine.

Created an Express.js API that serves email templates rendered from MJML markup to be consumed by our BE APIs. This eliminated the need for our BE services to create and maintain fiddly HTML templates and allowed the growth team to self-serve for campaign emails via a bespoke user interface.

Designed and rolled out a FE architecture and component library for use across the business, eliminating the diverging, emergent architectures that slowed down development and increased resistance to team members moving between projects. Since then, expectations are much clearer, confidence in what we are delivering has improved, and we've been able to do more with a smaller headcount.

Upgraded our approach to application logging across our apps, utilising Azure's *Application Insights* SDK and integrating it with our feature flagging service, configcat-js. This enabled us to fine-tune the logging and sampling rate on the fly, targeting specific user groups if desired, while also controlling costs.

Eliminated errors that were impacting users through continuous monitoring of the application logs with a set of custom KQL queries. Also managed to weed out a lot of the less impactful exceptions that usually stemmed from poor architectural approaches or shaky integrations with 3rd party dependencies.

Reimplemented our consent management solution, leveraging Google Tag Manager (GTM) to integrate with a consent management platform (CMP) that ensures full compliance with all relevant privacy laws while simultaneously tracking opt-outs for better insight into overall traffic patterns.

Angular Developer . . . . `Oct 2022 - Aug 2023`

Led front-end development for our largest client, delivering big changes and upgrades to an enterprise web application that was suffering from an accumulation of technical debt and critical performance issues.

Key contributions:

Made a huge impact by delivering a 5x performance gain to multiple application KPIs and unlocking previously unreachable functionality. The application was made to streamline the creation of professional reports via an in-app editor backed by an HTML-to-PDF 3rd party dependency. The time it took to generate these reports and previews was intolerably slow for use within the edit-preview-edit loop.

By writing a custom JS framework for PDF generation I was able to improve performance across section previews and full report generations by a factor of 5 while also pushing compute out to end-user devices, reducing strain on the BE server. The performance of this framework scaled linearly with the size of the input, ensuring scalability, and also unlocked fine-toothed control over the look and layout of the complex reports being produced.

Pushed for change in the way we used NgRx for state management. It had been bolted on to the project, and the usage was full of anti-patterns, resulting in buggy and unreadable code. After leading some workshops and showing the way forward with some big refactoring efforts, we saw a dramatic fall in developer stress scores for that particular team and a big reduction in missed deadlines and regression bugs, earning myself the *Change Catalyst* quarterly award.

Junior Front-End Developer . . . . `Jan 2022 - Sep 2022`

Delivered features, 3rd-party integrations, and ticket resolutions, exceeding expectations and earning myself the *Team Player* quarterly award during my first quarter at the company.

Project Experience

Experience from side projects building with technologies that I don't get to play with as part of my 9-5.

- Built **CI/CD** pipelines with **GitHub Actions** for an app containerised with **Docker** .
- Developed native **Android** mobile applications and games with **Java** and **Android Studio**.
- Experimented with **AWS**, deploying basic cloud services such as EC2 instances and Lambda functions.
- Built an interactive web app with **Blazor** to explore real-time updates using **SignalR** and **SSR**.
- Made an open-source contribution to **Haskell**, an advanced purely functional programming language.

Education

M.Sci Computer Science (1st class, 4.0 GPA) . . . . 2016 - 2021
University of Birmingham