

Bruce Royce

Lead Frontend architect and Engineer

React and TypeScript applications for large datasets, real-time updates and AI-assisted workflows

London, UK (hybrid or remote) | bruceroyce@yahoo.com | www.linkedin.com/in/bruceroyce

SUMMARY

Architect and Lead Frontend Engineer with 26 years in web software, 16 of them in frontend. I build React and TypeScript applications for large datasets, real-time collaboration and AI-assisted workflows, and lead teams of 4 to 8 engineers while still writing code. Recent results: cut a 30MB JavaScript bundle to about 1MB at Xapien; moved Legal500 from legacy WordPress to Next.js and raised its Lighthouse performance score from about 45 to 95; converted more than \$2.6M a quarter of paid traffic into organic traffic at PetLab Co. Earlier work at the BBC, American Express and Ecwid.

CORE SKILLS

Frontend	React, TypeScript, JavaScript, Next.js, Vue, HTML5, CSS/SCSS, Tailwind
Backend & Cloud	Node.js, Bun, PHP, Go; AWS; Backend-for-Frontend (BFF) design
UI architecture	Front-end architecture, design systems, WCAG, semantic HTML, responsive UI
Data and state	REST APIs, TanStack Query, GraphQL, Zustand, Redux Toolkit, WebSockets
Quality and delivery	Jest, Vitest, Storybook, Playwright, CI/CD, observability
Performance and security	Core Web Vitals, bundle profiling, secure progressive web apps
Data visualization	D3.js, Chart.js, Tremor, Pixi.js, WebGL; interactive analytics, real-time visualisation, data-driven interfaces
Leadership	Leading teams of 4 to 8 engineers; mentoring, architecture decisions, feedback, and delivery with product, design and backend teams

PROFESSIONAL EXPERIENCE

PetVitae Labore – Founding Engineer, Independent venture | Jan 2026 – Present | UK

Stack: Bun, TypeScript, Next.js, Tailwind, Strapi (headless CMS)

- Set up the technical foundations and architecture for an early-stage pet nutrition venture, with full responsibility for delivery.
- Built a lightweight cloud backend and the frontend, with accessibility and a simple user experience as the priorities.

Xapien – Lead Frontend Engineer, contract | Jun 2025 – Dec 2025 | London, UK

Stack: React (TypeScript), TanStack, Tailwind, Turborepo, Go (BFF), MongoDB, AWS, Linear

- Rebuilt the frontend as a thin, modular React application. Moved business logic, data transformers and most route guards into a Go backend-for-frontend, with clear contracts between the backend teams. Led 4–6 engineers.
- Cut the JavaScript bundle from 30MB to about 1MB and made data loading close to instant with loading pages and several cache levels. Released at least twice a week.

Legal500 – Lead Frontend Engineer | Jul 2024 – Mar 2025 | London, UK

Stack: Next.js (TypeScript), Tailwind, SWC, Node, GraphQL, Kafka, MongoDB, Azure DevOps, Heroku

- Led 4–6 engineers moving a legacy PHP/WordPress site to Next.js, with a MongoDB-backed backend-for-frontend and several relational databases consolidated.

- Built a component library and design system now used by three other departments.
- Cut the time to deliver changes from several weeks to 5–10 major features per four-week sprint.
- Raised the Lighthouse performance score from about 45 to 95.
- Used analytics to find and fix usability problems for legal professionals, working with several departments.

PetLab Co Group – Lead Frontend Engineer, *contract* | Jul 2023 – Jun 2024 | London, UK

Stack: Next.js & Gatsby (TypeScript), MySQL, Strapi, Optimizely, AWS

- Converted more than \$2.6M per quarter of paid traffic into organic traffic, cutting direct-marketing spend by that amount.
- Brought page speed close to 100 with workers and caching, and separated traffic by serving region (UK, US, Germany, Mexico).
- Led a team of 6 developers (up to 8 in busier sprints) and ran a second team in parallel while its lead was on leave. Mentored developers on architecture and testing and standardised workflows.

British Film Festival – Staff Engineer | Mar 2019 – May 2023 | Iver, UK

Stack: Next.js (TypeScript), Node, MySQL, Vercel

- Built the remote judging platform for close to 1,000 entrants from about 90 countries, covering short and feature films, adverts, music videos, fashion films, animations and game intros.
- Reworked the customer-facing web application for performance and reliability, leading a distributed team of one employee plus contractors and volunteers, with numbers changing by project.

American Express - Senior Frontend Engineer | Oct 2015 – Mar 2019 | London, UK

Stack: JavaScript, JSP, Node, React

- Redesigned digital-product acquisition funnels, added engagement and conversion analytics, and simplified the customer journey with asynchronous, API-driven interactions.

Ecwid/Lightspeed – Senior Software Engineer | Aug 2013 – Aug 2015 | Prague, CZ

Stack: PHP Symfony, JavaScript, AWS

- Architected high-traffic global payment integrations and developer SDKs.
- Built secure, accessible web components for financial operations, and improved DevOps pipelines and cross-team integration.

BBC – Lead Engineer (Various) | 2007 – 2013 | London, UK

Stack: JavaScript, WebGL, ASP/ASP.NET

- Led teams building the BBC's virtual studio and live graphics control systems.
- Built real-time analytics, data-visualisation and operational interfaces for broadcast and Smart TV/iPlayer. Early contributor to design system adoption; mentored engineers and aligned editorial and engineering workflows.

EDUCATION

MEng, Computer Engineering (Hardware) – University of Tehran, Faculty of Engineering

BEng, Mechanical Engineering (Heat and Fluid Mechanics) – University of Tehran, Faculty of Engineering

CERTIFICATIONS

BBC Accessibility and Inclusive Design; BBC Test Academy; Apollo GraphQL; Vizrt real-time systems