Colin Clark | staff software engineer

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Profile

A consummate and passionate **Staff Software Engineer** with **17 years commercial experience** in web development. Highly skilled in the architecting, engineering and deployment of quality software on time and to budget. Has an excellent understanding of project lifecycles and the different technologies that comprise robust and scalable solutions. Expert in innovating ambitious yet efficient technical strategies with a strong ability to promote stakeholder engagement. Excels at positively influencing the direction of people, product and process in a leadership role across multiple teams.

Skills & Achievements

- **Domain-Driven Design:** Mapping business logic to software services to empower domain experts in several squads, enabling them to ship organised and scalable deployment artefacts with confidence.
- **Service-oriented Architecture:** Driving the standards of excellence for an entire product department to ensure the delivery of flexible, independent micro-services.
- **DevOps:** Streamlining CI/CD deployments via automated pipeline enhancements, reducing associated costs by 55%, whilst enforcing best-in-class standards for testability, observability, security and performance.
- **Expert React/TypeScript Engineering:** Developing accessible, branded and performant UI components in private and public repositories. Implementing responsive and adaptive designs to cater for multiple devices. Strategising, documenting and building out the communication, routing, internationalisation, testing and many other associated frontend concerns.
- **Expert Node/TypeScript API Engineering:** Designing and coding organised REST-based APIs across numerous industries. Migration of legacy APIs and SQL databases to modern solutions such as GraphQL and NoSQL.
- **SEO Optimisation:** Performance and SEO fine-tuning, with heavy focus on core web vitals and page speed. Optimising sites into first place for organic Google rankings for relevant search terms.
- **Diligence & Ownership:** Practitioner and advocate of self-reliance and attention to detail.
- **Recruitment & Training:** Recruiting and mentoring dozens of aspiring engineers across numerous companies and industries, many of whom now lead successful careers in programming.

Technology Stack

- CI/CD – Gitlab, Jenkins, AWS, Azure
- AppCheck, New Relic, Datadog
- Docker, Kubernetes
- Microservices, micro-frontends (single-spa & webpack module federation)
- SQL, NoSQL, GraphQL, REST
- TypeScript, JavaScript (ES6+), webpack, vite, parcel
- Node.js, npm
- ReactJS, Redux, RxJS (Observables), Vue
- TDD, BDD, E2E - Cucumber, Selenium, Cypress
- HTML5, CSS3, SASS, D3, Canvas
- Accessibility, SEO, responsive design, mobile first, cross-browser compatibility
- Agile methodologies

Career History

Essensys, Staff Software Engineer, Jan 2023 – present

Head engineer, responsible for the architecture, codebase and deployment process of a service-oriented application that manages flexible working spaces for global B2B clients. React, Serverless, Lambda, Node, TypeScript, AWS EventBridge.

- Oversees and manages six lead engineers as direct reports from across mobile, desktop and IoT teams.
- Promotes coding excellence by restructuring microservices: removing unwanted dependencies, enforcing clean code and defining engineering standards for testing, performance and observability.
- Simplifying code to enhance user experience, improving performance by reducing duplicated network requests (saving £15K+ per month).
- Runs Architectural Review Boards, collaborating across four functional squads to develop improved branding, localisation and authentication patterns. Owns a weekly tech forum for the dissemination of ideas and knowledge.
- DevOps: reduce cost of running deployment pipelines by 55%+. Increasing deployment frequency whilst reducing the change failure rate through faster feedback and better observability in test environments (Datadog).

CoStar Group, Lead Software Engineer, Oct 2019 – Dec 2023

Migrated a legacy tech stack to a modern Vue SPA for a commercial property listings website. Responsible for SEO, branding and testing strategies for the entire product, alongside delivery of new features and functionalities.

- Achieved first-place in organic Google rankings, utilising Google Analytics, Lighthouse, etc., to drive customer engagement. Developed KPIs and associated automated deployment health check to ensure top-level performance metrics are maintained, with heavy focus on vitals such as page speed, TTFP, LCP, FID, CLS and accessibility.
- Fostered a culture of clean code delivery across a team of 12 engineers, running workshops and technical forums, showcasing latest technologies, promoting internal innovation and knowledge sharing.
- Introduced frontend suite of tests (BDD).

The Times & The Sunday Times, Staff React Engineer, Jan 2018 – Jun 2019

Replaced the current The Times and The Sunday Times websites and mobile apps with a single hybrid React open-source codebase. Built components in React Native Web to deliver for desktop, iPhone and android. Focused on branding, scalability, modularity, testing and monitoring of performance and security. Ensured team wrote code to an exacting design specification. Migrated a legacy REST API and database to TypeScript – GraphQL repository and DynamoDB.

Boston Consultancy Group, Lead JavaScript Engineer, May 2016 – Dec 2017

First developer on a greenfield start-up project with large corporate budget, collating customers' financial services data and curating alternative offers across the market. Designed and developed a hybrid React desktop and React Native mobile application from scratch. Employed best practice solutions (reactive programming, composition, mobile first, BDD, lean) to deliver functionality iteratively, taking the product to market in less than six months and delivering 100,000+ users after one year. Recruited senior developers and led the evolution of software and process in the team.

Beyond Analysis, Lead JavaScript Engineer, Jan 2016 – April 2016

Documented and introduced unit and integration testing alongside new features to a service-oriented Node application that surfaced big data using D3 and Canvas visualisation components. Mentored three junior developers, elevating them to confident mid-level engineers who could self-organise and roll out new features independently within a tight frame. Ensured adherence to existing coding patterns within the microsite architecture (Node, PostgreSQL, and Angular) whilst introducing best coding practices, such as conventional commits, pair programming and better code reviews.

Sky, Osterley, Senior JavaScript Engineer, March 2015 – Dec 2015

Built a CMS that allowed Sky editors to customize programme scheduling for the new Sky Q set-top box and online mobile apps. Helped recruit junior developers from Sky's graduate team, mentoring and upskilling the team to enable long-term quality delivery. Architected this greenfield project as a full stack JavaScript role, utilizing MongoDB, Node (REST API) and Angular. Practiced pseudo-extreme programming with an emphasis on BDD.

Deutsche Bank, London, JavaScript Developer, Nov 2011 – Feb 2013

Replaced a legacy PHP site with an internal Node application, cataloguing technologies to ensure good governance and best practice within the bank. HTML5 APIs, CSS3 with a responsive layout and various npm modules comprised the solution.

Front-End Contracts, Cambridge & London, September 2006 – October 2011

- Microsites for Camelot, Oxfam and Children In Need.
- AAA accessible templates for the Royal National Institute For The Blind.
- Responsive video-on-demand website for Sky (pre-cursor to Now TV).
- Worked with remote third party in the US to produce social networking features for Sky News, Sky Player and Sky's homepage.

For Fun

Travel: South America, March 2013 – Feb 2015

Travelled throughout South America. Swam in the Amazon, walked on a glacier, drove a 4x4 at 5000 meters and climbed a smoking volcano.

Enjoys running, travel and literature.