

# MAHDI BOOMERI

Senior Front-End Engineer

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## PROFESSIONAL SUMMARY

Senior Front-End Engineer with **6 years of experience** owning complex, scalable web applications from architecture to cloud infrastructure deployment. Sole engineer responsible for all technical decisions on a **clinically validated biometric assessment platform** serving **Warner Bros., the UK Government, and NHS-affiliated organisations**, with findings contributing to **neurodivergent research at the University of Liverpool**. Proven record of measurable outcomes: raised **Lighthouse score from 75 to 100**, reduced **MSSQL query latency by 35%**, cut **user verification time by 40%** via backend event logging, and executed a **zero-downtime Vue 3 to Nuxt SSR migration** using parallel nginx routing. Active **Nuxt 3 core contributor**.

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## PROFESSIONAL EXPERIENCE

**Senior Front-End Engineer** | **Tribes Agency** | *Apr 2023 – Present*

- **Architected** all technical decisions for a **Next.js clinical assessment platform** spanning a multi-tenant infrastructure across **Warner Bros., UK universities, NHS-affiliated health organisations, and the UK Government**; platform data actively supports neurodivergent research at the **University of Liverpool**.
- **Engineered** a browser-based **biometric capture pipeline** using WebGazer gaze tracking, scroll-velocity profiling, click-timing and dwell analysis, frame-rate normalisation, and **persistent session state management** across multi-step form navigation.
- **Designed** an **AI-powered report generation pipeline** with multi-step prompt chaining, strict JSON schema enforcement, programmatic validation, streaming output, and **structured audit logs** capturing model, prompt, inputs, and outputs per report — enabling full **CI/CD-compatible model versioning** and traceability.
- **Translated** DSP Toolkit and **UK GDPR** obligations into concrete engineering controls for data handling, audit logging, and access constraints — ensuring **regulatory readiness for NHS and government procurement**.
- **Standardised** shared **REST API contracts** between the Next.js web application and a **React Native mobile client**, guaranteeing identical question-set structure and biometric session handling across both scalable cross-platform surfaces.
- **Shipped** a **venue management dashboard** for Day Out With The Kids — a UK platform serving **millions of families across 8,500+ attractions** — converting Figma designs into production React components within a 4-person agile team.
- **Spearheaded** a post-deployment takeover as **Lead Engineer**, owning full-stack development across frontend and backend (Node.js / Hapi.js); audited technical debt, established a comprehensive **test suite**, refactored component architecture, and launched a complete redesign featuring guided onboarding, **analytics dashboards**, and a **role-based access control (RBAC) permission system**.
- **Orchestrated** a **zero-downtime migration** from a legacy ASP.NET monolith to a Node.js / WordPress stack, reconciling MSSQL database attributes with live **Dynamics CRM** venue flags at query time.
- **Reduced average MSSQL query execution time by 35%** through join restructuring, targeted **index strategy**, and caching layers on high-frequency search paths; migrated **10,000 users and 7,000 venue records** with zero credential loss or session disruption.
- **Achieved a perfect Google PageSpeed score (100/100)** on a custom WordPress theme while mirroring the legacy URL structure, preserving search equity for a business with **1,000+ five-star reviews** without redirect regressions.
- **Produced** a library of **25+ GSAP animated UI components** targeting **60fps delivery** across device tiers, with rigorous attention to repaint and reflow impact and clean live-data binding interfaces.
- **Managed** deployment pipelines across all client engagements using **Docker, Docker Compose, PM2, and nginx** traffic routing, applying targeted caching strategies on complex data-access paths.

**Front-End Developer** | **Rewhys – Canadian Immigration Platform** | *Apr 2022 – Apr 2023*

- **Elevated** Google Lighthouse performance score **from 75 to 100** by introducing lazy hydration and overhauling the media generation pipeline, reducing **Largest Contentful Paint (LCP)** through deferred image loading and eliminating **Cumulative Layout Shift (CLS)** by reserving layout space.
- **Eliminated** rendering jank on eligibility tables holding **5,000–50,000 rows** by replacing full-DOM synchronous renders with **virtual list windowing** and async component loading.
- **Executed a zero-downtime incremental migration** from a Vue 3 Single-Page Application to a Nuxt SSR architecture by running both applications in parallel behind nginx, shifting traffic route-by-route with the SPA as an automatic fallback — a **blue-green deployment strategy** ensuring 100% service continuity.
- **Restructured** a multi-repository codebase into a **Turborepo monorepo** with NPM workspaces, establishing shared **TypeScript type contracts** between backend and frontend and eliminating redundant build steps — strengthening **CI pipeline efficiency** and developer experience.
- **Contributed** to the **Nuxt 3 open-source core** by implementing the optimistic-update data-fetching pattern via a merged pull request, shipping a **real-time responsiveness improvement** to all Nuxt 3 users globally.
- **Optimised** a branching conditional-logic eligibility system that dynamically skipped irrelevant question paths based on prior answers, **cutting verification completion time by 40%** as measured via backend event logging.

### Front-End Developer | FarazEC – Development Agency | May 2020 – Apr 2022

- **Developed** reusable **component libraries** encoding standardised design systems across concurrent client projects, accelerating front-end delivery and enforcing visual consistency at scale.
- **Implemented** custom **Grafana React plugins** for administrator dashboards, integrating real-time data visualisation into internal tooling for non-technical stakeholders.
- **Launched** e-commerce frontends integrating **Strapi and WordPress headless CMS** backends, enabling content teams to manage product catalogues independently of engineering cycles.

## OPEN-SOURCE CONTRIBUTIONS

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### Nuxt 3 – useNuxtData Composable

- **Authored** and merged a helper composable enabling **optimistic-update patterns** in Vue components; now shipped as part of **Nuxt 3 core** to all framework users globally.

### Nitro – TypeScript-Friendly API Routes

- **Aligned** server engine API output types with JSON serialisation boundaries, eliminating a class of **type errors** across all Nuxt 3 server routes.

### Nitro – Vercel Configuration Support

- **Introduced** native **Vercel configuration support** in the Nuxt 3 server engine, enabling the Vercel image optimisation platform within the Nuxt image module and expanding cloud deployment options.

### Nuxt 3 – Official Documentation

- **Documented** guides on **lazy hydration** for fine-grained component optimisation and customised serialisation in data-fetching composables; both remain in active use in the **official Nuxt 3 docs**.

## TECHNICAL SKILLS

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**Languages:** TypeScript, JavaScript (ES2022+), PHP, HTML5, CSS3, SQL

**Frameworks & Libraries:** React.js, Next.js, Vue.js, Nuxt.js, Node.js, Hapi.js, GSAP

**Styling & UI:** TailwindCSS, Headless UI, TailwindUI, SASS, Storybook.js

**State Management & Data:** Vuex, Pinia, tRPC, REST APIs, GraphQL, Optimistic Updates, Virtual List Windowing

**Testing & QA:** Jest, Cypress, Snapshot Testing, End-to-End (E2E) Testing, Custom Benchmarking Harnesses

**Cloud Infrastructure & DevOps:** Docker, Docker Compose, PM2, nginx, Turborepo, NPM Workspaces, Git, CI/CD Pipelines

**Database & Performance:** MSSQL, Query Plan Analysis, Index Strategy, Caching Layers, Query Optimisation

**AI & Clinical Systems:** Multi-step Prompt Chaining, JSON Schema Enforcement, Programmatic Validation, Audit Logging, Streaming, Model/Prompt Versioning

**Integrations:** WordPress, Strapi, Dynamics CRM, WebGazer, ABlyft, Vercel

## EDUCATION

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**Software Testing and Automation** – University of Minnesota

**JavaScript Security** – Infosec Institute