

SUMANTH VENKATA

Senior UI / Front-End Engineer · React · Angular · TypeScript · Micro-Frontends

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PROFESSIONAL SUMMARY

Senior front-end engineer with 8 years building large-scale, responsive web applications — including 5+ years hands-on with React and Redux, plus Angular and TypeScript — for enterprise and federally regulated platforms. Currently lead front-end engineer on CMS's QualityNet Platform, a federal healthcare system whose data drives Medicare value-based purchasing and reimbursement decisions worth billions, where I architect a Module Federation micro-frontend platform (Vite) across React and Angular apps. Strong in design systems, rich data-grid visualization, high-performance SPAs, Material UI, Figma-to-code, and modern testing (Jest, React Testing Library, Cypress), with deep Section 508 / WCAG accessibility expertise.

TECHNICAL SKILLS

Languages	JavaScript (ES6+), TypeScript, HTML5, CSS3, SASS/LESS
Frameworks	React.js (React 18, JSX, Hooks, Context API), Redux, Angular (2–20), Node.js, Express.js, RxJS, NgRx
UI & Data Viz	Material UI (MUI), AG Grid, AmCharts, Angular Material, Bootstrap, Tailwind CSS
Design & UX	Figma (mockups, components, design-spec / CSS inspection), wireframing, hand-off design, responsive & accessible UI
Architecture	Micro-Frontends, Module Federation, design system / shared component library (private npm), Storybook, SPA & PWA, responsive design
Build & Testing	Vite.js, esbuild, Webpack, Rollup, Babel, npm Jest, React Testing Library, Cypress (e2e), Enzyme, Jasmine, Karma, TDD, browser DevTools debugging
CI/CD & DevOps	Jenkins (Groovy shared libraries), GitHub Actions, Docker, AWS ECS, JFrog Artifactory, SonarQube, Husky / Prettier / lint-staged, npm publishing, Git / GitHub
Analytics	Matomo, Datadog RUM, New Relic Browser, real-user monitoring (RUM), custom event & page-view tracking
GenAI / AI	LLM integration (Anthropic Claude), prompt engineering, structured outputs & schema validation, semantic & vector search (embeddings), agentic / AI-assisted development (Claude Code), AI-powered automation pipelines
APIs & Web	RESTful APIs, JSON, AJAX, JWT authentication, DOM & JavaScript object model
Accessibility	Section 508, WCAG 2.x, ARIA, JAWS, NVDA, Axe, WAVE HIPAA, FedRAMP / FISMA standards
Practices & Tools	Agile / Scrum, code reviews, mentoring, Jira

PROFESSIONAL EXPERIENCE

Cadmus Group — Senior UI / Front-End Engineer

CMS · Reston, VA (Remote) | Mar 2019 – Present

Quality Net Platform (QNP) is CMS's secure federal platform for healthcare quality reporting across six federally mandated programs. Production scale: 1.3M+ user sessions and 3.8M+ pageviews per year; built to HIPAA, Section 508, and FedRAMP / FISMA standards.

- **Micro-Frontend Architecture — Architected** and maintained a **Module Federation** micro-frontend platform built on **Vite**, hosting multiple independently deployable UI applications behind a shared authentication shell and a common component library — enabling teams to build, test, and deploy in parallel.

- **Shared Component Library** — Built and published a private **npm design-system / component library** (documented in **Storybook**) consumed across all platform applications — standardizing UI patterns, accessibility, and theming, and accelerating delivery across teams.
- **React Applications** — Lead development of React-based modules using **React 18**, Hooks, Context API, **Redux**, and **TypeScript**, translating **Figma** designs into reusable components and data dashboards that consume **RESTful APIs**.
- **AI-Powered Search** — Built the **React + TypeScript (Vite)** front end for an internal **AI-powered semantic document-search** tool over CMS policy and measure PDFs — rendering ranked results with source metadata (document, page, relevance score) and links to source files, consuming a **vector-search API** (sentence-transformer embeddings + ChromaDB); tested with **Vitest** and Testing Library.
- **Angular Applications** — Deliver and oversee **Angular** (through v20) applications for reporting and administrative domains, using **RxJS** and **NgRx** for reactive state management and predictable data flow.
- **Technical Leadership** — Oversee front-end work across **both React and Angular** applications: define UI standards, run **code reviews**, and mentor developers to keep a large, multi-team codebase consistent and maintainable.
- **Design Collaboration** — Partner closely with UX designers in **Figma** — drafting mockups and components, inspecting design specs and CSS, and translating designs and wireframes into pixel-accurate, accessible, responsive UI.
- **Data & Reporting UI** — Build responsive interfaces and **data-grid and visualization components** that present large volumes of quality-reporting and reimbursement data to hospitals, clinicians, and CMS program staff.
- **Analytics & Observability** — Implemented client-side analytics and real-user monitoring across React and Angular apps — integrating **Matomo**, **Datadog RUM**, and **New Relic Browser** — with router-driven page-view and custom event tracking, zone-safe (NgZone) instrumentation in Angular, and standardized event-naming conventions for product and performance insights.
- **Build & Performance** — Optimized build pipelines (**Vite**, **esbuild**, **Webpack**), cutting production build times ~5–10× by migrating to esbuild-based tooling, and tuned bundling and load performance across a platform serving **1.3M+ annual sessions and 3.8M+ pageviews**.
- **CI/CD & DevOps** — Partnered with the platform team on front-end **CI/CD**: authored reusable **Jenkins** shared-library functions (**Groovy**) for standardized builds and **Docker** deployments, and integrated **SonarQube**, code-coverage, and Section 508 quality gates plus Husky / Prettier pre-commit checks across repositories.
- **APIs & Integration** — Engineer **RESTful services** with **Node.js** and **Express.js** and integrate front-ends with **REST API middleware**; secured access with **JWT** and handled **OAuth 2.0 single sign-on** (token storage, refresh, and session expiration) in the shell application.
- **Accessibility & Compliance** — Deliver full **Section 508 / WCAG** accessibility (validated with JAWS, NVDA, and Axe) on a federal platform built to **HIPAA and FedRAMP / FISMA** standards; test with Jest, Enzyme, Cypress, Jasmine, and Karma under a **TDD** approach.

UnitedHealth Group / Optum — Senior React Developer

Hartford, CT | Jul 2018 – Feb 2019

Contract via Pioneer Consulting Services. Built the front end of BEACH (Benefit Eligibility and Coverage Hub), a benefits-browser application giving employees access to health-plan coverage, copays, deductibles, and coinsurance data.

- **Performance** — Developed fast, responsive UIs in **React** and **TypeScript**, reducing page load times by **30%** and improving Lighthouse scores by 20+ points.
- **Data Visualization** — Built rich visualizations using **AG Grid** for large tabular datasets and **AmCharts** for sales / profit and coverage analytics.
- **Component Library** — Implemented **Material UI** components and a reusable component library for consistent, accessible UI delivery.
- **State Management** — Managed application state with **Redux** for reliable data flow across complex, data-heavy views.

- **Testing** — Achieved **80%+ unit-test coverage** using **Jest**, **React Testing Library**, and **Enzyme**, with **Cypress** for end-to-end coverage, reducing post-release defects.
- **Optimization** — Implemented lazy loading and **route-based code splitting**, cutting initial bundle size by **40%**.
- **APIs** — Developed supporting **REST APIs** with **Node.js** and **Express.js** for dynamic, high-traffic data handling.
- **Collaboration** — Participated in **code reviews**, mentored junior developers, and improved sprint planning through better estimation.

PERSONAL PROJECTS

The Big Screen Index — GenAI Editorial Automation Platform

TypeScript · Anthropic Claude API · Puppeteer · GitHub Actions · Cloudflare R2 | github.com/sumanthvenkata03/ott-weekend-bot

- **GenAI Platform** — Built a **production GenAI platform (TypeScript)** that auto-generates publication-grade Instagram carousels and reels from structured data — full ownership from ingestion to scheduled delivery.
- **AI Integration** — Integrated the **Anthropic Claude API** with **prompt engineering** and type-safe, schema-validated **structured JSON outputs**, backed by rules-based quality guardrails.
- **Automation** — Automated rendering and delivery end-to-end via **Puppeteer**, **GitHub Actions**, **Cloudflare R2**, and **Slack**, built through an agentic **Claude Code** workflow (30+ commits).

EDUCATION

Master of Science, Computer Science — University of Central Missouri

2016 – 2017

Bachelor of Science, Computer Science — Anna University, India

2012 – 2016