

AKHIL KUMAR MADA SAI

Senior Software Engineer — Frontend Architecture | React & Micro-Frontends | OTT, Live Streaming & Localization

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SUMMARY

Frontend architect with 9+ years building enterprise OTT, VOD, and live-sports streaming platforms serving millions of concurrent viewers, including NFL, Olympics, and US Open. Own the React and micro-frontend architecture across Comcast, NBCUniversal, and Sky, including the shared internationalization layer that lets partner-facing surfaces ship multi-language UIs from one codebase. Build production AI agents for code generation, testing, and CI/CD.

TECHNICAL SKILLS

Frontend & Architecture: React (component design, state management, performance optimization), TypeScript, Angular, micro-frontends, design systems, internationalization (i18n), NgRx/Redux, lazy loading, OWASP secure coding, WCAG 2.0/ADA accessibility
AI Engineering: AI agent development, LLM integration, workflow automation, generative AI APIs, prompt engineering
Backend & APIs: Java Spring Boot, RESTful API design, B2B data integration
Cloud & Observability: AWS (S3, CloudFront, RUM), CDN, WAF, ELK Stack, Splunk, Grafana, Adobe Analytics
Delivery & Quality: CI/CD (Jenkins, GitHub), Webpack, Cloud Foundry, Jasmine, Karma, Agile/Scrum

PROFESSIONAL EXPERIENCE

Software Development Engineer 4 — Frontend Architect & Tech Lead Sep 2024 – Present
Comcast NBCUniversal, Global Entertainment

- Built the shared internationalization (i18n) layer for the micro-frontend platform, standardizing locale handling and message catalogs so Comcast, NBCUniversal, and Sky teams ship multi-language UIs from a single codebase.
- Own end-to-end frontend architecture across Comcast, NBCUniversal, and Sky, migrating monolithic legacy UIs to a unified React and Angular micro-frontend platform with independent team deployments, built to WCAG 2.0/ADA accessibility standards.
- Delivered secure, high-performance metadata services to external partners — Sky, NBCU, Rogers, Sony, Cox — to ingest Comcast’s streaming catalog and validate VOD feed ingestion.
- Engineered and stabilized streaming surfaces for NFL, Olympics, and US Open live broadcasts, sustaining millions of concurrent global streams at peak.
- Saved ~\$500K annually for Sky by architecting an in-house metadata platform that absorbed ingest, normalization, and delivery, replacing premium third-party catalog subscriptions.
- Built autonomous AI agents for code generation and unit-test automation, plus deployment agents that cleared CI/CD bottlenecks — cutting cycle time by 70% and raising release frequency within a sprint cycle.
- Established enterprise observability via cross-platform AWS RUM, ELK Stack, and Grafana, with proactive alerting on client-side degradation.
- Mentor 4–6 engineers and drive SDE interview loops, partnering with Product, UX, and Infrastructure.

Software Development Engineer 3 — Senior Frontend Engineer Apr 2021 – Sep 2024
Comcast NBCUniversal, Global Entertainment

- Led development of mission-critical metadata portals and scheduling admin tools forming the backbone UX for NFL, Olympics, and US Open VOD/live interfaces.
- Designed and shipped SPAs in React and Angular integrated with Java Spring Boot services, meeting WCAG 2.0/ADA accessibility requirements.
- Championed the initial rollout of AWS Real User Monitoring across all public frontend properties, enabling data-driven UI performance improvements.

Senior Software Engineer Jul 2017 – Apr 2021
Vyzer Solutions, Inc. — Enterprise Client Engagements

- **Virginia Department of Taxation:** developed the state’s tax-filing web application from scratch under strict WCAG 2.0/ADA compliance.
- **Connexions Loyalty (JPMC):** developed loyalty web applications for FedEx, Bank of America, and Wells Fargo.
- **Hydro Electronic Devices:** developed web applications for first-responder fleet management.

EDUCATION & CERTIFICATIONS

MBA, Business Administration — University of the Cumberlands Jan 2020 – Oct 2021
M.S., Computer Engineering — University of Houston-Clear Lake Aug 2015 – Dec 2016
B.E., Electrical & Electronics Engineering — Osmania University, India Aug 2011 – May 2015
• Google AI Professional Certificate (2026) • WCAG 2.0/ADA Accessibility Specialist