MURALI GUMMALLA

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EXECUTIVE SUMMARY

Strategic Lead Frontend & Full-Stack Engineer with extensive experience architecting large-scale, high-traffic web applications across Retail, E-Commerce, and Digital Platforms. Expert in driving long-term frontend technical roadmaps, modernizing legacy systems, and leading engineering teams in delivering high-performance isomorphic applications using ReactJS, Next.js, TypeScript, Tailwind CSS, GraphQL, RESTful APIs, and AWS. Proven track record of designing scalable component design systems, orchestrating predictable state management (Redux Toolkit, Context API, Signals, Immutable patterns), building custom React hooks, and delivering robust CI/CD automation pipelines under Agile/Scrum methodologies.

TECHNICAL SKILLS

- **Frontend & Architecture:** ReactJS, Next.js (SSR / SSG / ISR / Isomorphic React), TypeScript, JavaScript (ES6+, DOM Manipulation, Object Model), Tailwind CSS, Custom React Hooks, Material UI, GraphQL, Angular, Vue.js, Webpack, Vite
- **State Management & Data Flow:** Redux Toolkit, React Context API, Signals, RxJS, Immutable.js / Immutability Patterns, React Query (TanStack), Server & Client State Synchronization
- **Backend & APIs:** Node.js, ASP.NET Web API, .NET 8 / .NET Core, C#, Python, RESTful API Design, GraphQL APIs, gRPC, Entity Framework Core, Microservices Architecture
- **Cloud, AWS & Security:** AWS (Lambda, S3, CloudFront, SQS, SNS, DynamoDB), CloudFormation, JWT Authentication / OAuth2 / IdMS, API Gateways, Zero-Trust Authorization
- **DevOps & CI/CD Pipelines:** Azure DevOps / VSTS, GitHub Actions, Jenkins, GitLab CI, Docker, Kubernetes, CI/CD Automated Pipelines, Terraform
- **Leadership & Delivery:** Strategic Technical Roadmapping, Frontend System Design, Cross-Functional Technical Mentorship, Agile / SCRUM Leadership, Sprint Planning, Architectural Reviews & ADRs
- **Data & Analytics:** SQL Server, PostgreSQL, DynamoDB, Azure Synapse, Apache Spark, Power BI, Splunk, CloudWatch

PROFESSIONAL EXPERIENCE

Tech Mahindra **Jul 2025 – Present**

Lead Engineer / Technical Lead | Microsoft **Redmond, WA | Jul 2025 – Present**

CFS Financial & Organization Data Platform Modernization

- Drive long-term technical strategy and system architecture for high-throughput enterprise data and web translation platforms, aligning Microsoft stakeholders and cross-functional engineering teams.
- Architect scalable service layers and API contracts integrating Next.js/React consumer dashboards with high-performance backend microservices (.NET 8, gRPC, GraphQL, and RESTful APIs).
- Spearhead architectural decision records (ADRs) and cloud infrastructure strategy, establishing automated CI/CD deployment pipelines, managed identity, and zero-downtime database migrations.
- Champion engineering excellence and operational telemetry, utilizing KQL and distributed logging to enforce strict performance SLAs, rapid issue remediation, and high code quality across Agile releases.

DigiTech Labs **Jan 2021 – Jun 2025**

Lead Full-Stack & Frontend Engineer | Moody's Investors Service **Charlotte, NC | Jan 2025 – Jun 2025**

- Directed frontend architecture and UI strategy for large-scale web applications, creating responsive, utility-first design systems using Tailwind CSS and Material UI integrated with Angular 17 / React.
- Standardized global state management and reactive data flows leveraging Signals, RxJS, and Context API alongside custom hooks to ensure predictable, bug-free client-side data mutations.
- Delivered Next.js (App Router) analytics experiences using React Server Components, SSR / ISR with on-demand revalidation, and Suspense streaming to cut time-to-first-byte and improve Core Web Vitals.
- Built Node.js / Express backend-for-frontend (BFF) services that aggregate .NET 8 GraphQL and REST endpoints, with JWT / OAuth2 middleware, request validation, response caching, and structured logging.
- Engineered unified GraphQL and RESTful API endpoints in C# / .NET 8, optimizing query execution plans and caching layers to deliver low-latency data to downstream analytics and ML interfaces.
- Optimized client-side rendering and DOM performance, implementing memoization (useMemo/useCallback), dynamic imports, and lightweight state subscriptions to achieve sub-second load times.
- Mentored engineering squads on modern frontend build pipelines, TypeScript type safety, and GenAI/OpenAI API integrations within Agile/Scrum delivery cycles.

Lead Frontend / Full-Stack Engineer | Experian **San Diego, CA | Mar 2022 – Dec 2024**

- Spearheaded modernization of high-traffic consumer web applications, migrating legacy platforms to an isomorphic ReactJS / Next.js architecture styled with Tailwind CSS and modular UI components.
- Engineered complex state management architectures utilizing Redux Toolkit, Context API, and Immutable data structures to maintain state consistency across multi-step financial flows.
- Authored a suite of custom reusable React hooks for asynchronous data fetching, form validation, debounce logic, and DOM event handling, boosting team code reuse by 40%.
- Architected secure event-driven AWS cloud workflows utilizing AWS Lambda, SQS, SNS, S3, and DynamoDB for real-time background processing, secured via JWT and OAuth2 authorization.
- Established reusable component boilerplates and build tools, optimizing Webpack/Vite pipelines, code-splitting, and lazy loading to reduce bundle size by 35% and boost Core Web Vitals.
- Built and managed end-to-end CI/CD pipelines (Azure DevOps, GitHub Actions, Jenkins) and championed test-driven development (Jest, React Testing Library), lifting code coverage from under 50% to over 80%.

Senior Software Engineer | Paccar **Renton, WA | Oct 2021 – Mar 2022**

- Led architectural decoupling of monolithic enterprise portals into modular service-based architectures using React, Node.js, and .NET Core RESTful APIs.
- Configured CI/CD automation pipelines in Azure DevOps/VSTS, streamlining artifact releases and test validations to ensure reliable, high-velocity sprint deliveries.

Senior Frontend & Software Engineer (Retail / Consumer Domain) | Starbucks **Seattle, WA | Jan 2021 – Sep 2021**

- Drove performance optimization across retail data workflows and public-facing digital platforms, refactoring data pipelines to slash latency from 35+ minutes to 29 seconds.
- Built dynamic UI components and dashboards using React functional components, custom hooks, Tailwind CSS, and Power BI to empower retail teams with real-time customer analytics.
- Implemented robust schema validation and data transformations in C# and JavaScript, ensuring data integrity across high-volume retail transactions.

Wipro Technologies **Jul 2013 – Jan 2021**

Senior Frontend / Full-Stack Engineer | Apple **Culver City, CA | Feb 2020 – Jan 2021**

- Architected core Node.js & React frameworks managing authentication, JWT / IdMS authorization, and centralized state management for high-concurrency internal and public applications.
- Designed high-performance, reusable UI component libraries with TypeScript, deep DOM optimization, and isomorphic rendering patterns across containerized Kubernetes clusters.
- Engineered large-scale asset distribution pipelines leveraging Amazon S3 multipart uploads and distributed CDN workflows.

Software Engineer | Google **Sunnyvale, CA | Dec 2017 – Feb 2020**

- Led global payment integration and tax rollout configurations for Google Pay and high-traffic consumer retail products across APAC and LATAM regions.
- Architected high-availability failover and merchant redundancy systems, ensuring 99.99% uptime for mission-critical public payment endpoints.

Cloud Migration & Solutions Engineer | Hewlett-Packard **Austin, TX | Sep 2017 – Dec 2017**

Cloud Migration & Solutions Engineer | BP (British Petroleum) **Houston, TX | Nov 2016 – Sep 2017**

- Led cloud modernization and technical feasibility roadmaps for 60+ enterprise and consumer applications, presenting strategic go/no-go recommendations to senior stakeholders.

Software Engineer | Microsoft **Redmond, WA | Jul 2013 – Oct 2016**

- Architected analytics and test automation platforms for the public Windows Phone Store, managing high-throughput submission validation and workload distribution.

EDUCATION

- Master's Degree in Computer Science – Nagarjuna University, India
- Bachelor of Science – Nagarjuna University, India