

GOKUL KUMAR KRISHNAMOORTHY

Senior Frontend / Full-Stack Engineer | React • Next.js • TypeScript • Node.js

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PROFESSIONAL SUMMARY

Full-Stack Engineer with 5+ years of software development experience across the U.S. and India, specializing in React, Next.js, TypeScript and modern JavaScript. Experienced in building enterprise applications and real-time conversational interfaces from scratch, including streaming response integration, complex state management, reusable component architecture, frontend performance optimization and REST/GraphQL API integration. U.S. M.S. in Computer Science with additional hands-on AI/NLP research experience.

CORE SKILLS

Frontend: React, Next.js, Angular, TypeScript, JavaScript (ES6+), Redux Toolkit, Context API, RxJS, Tailwind CSS, Material UI, SCSS, Bootstrap

Backend / APIs: Node.js, Express.js, Java, RESTful APIs, GraphQL, authentication, validation, role-based access control

Cloud / Data / Quality: AWS (EC2, S3, IAM), Azure DevOps, MongoDB, MySQL, SQL Server, Playwright, Vitest, JUnit, Git, GitHub, Jira

Performance / Engineering: Real-time & Streaming UI, SSR, SSG, code splitting, lazy loading, memoization, Core Web Vitals, responsive design, WCAG accessibility, Agile/Scrum

PROFESSIONAL EXPERIENCE

UI Developer | AT&T, Plano, TX

Nov 2025 – Present

- **Designed and developed the complete frontend for a real-time Live Agent Chat application from scratch using React**, building the chat interface, reusable message components, conversation flows, agent interactions, loading states, error handling, and responsive user experiences.
- **Integrated streaming API responses into the React frontend**, progressively rendering incoming message content in real time instead of waiting for the complete server response, delivering a responsive ChatGPT-style conversational experience.
- Engineered the frontend to handle **incremental streaming updates, partial message rendering, connection lifecycle states, stream completion, failures, retries, and user interruptions** while maintaining a smooth chat experience.
- Built reusable chat components for **user/agent messages, streaming indicators, typing/loading states, conversation history, timestamps, errors, and interactive actions**, creating a scalable component architecture for future conversational features.
- Implemented robust **state management for active conversations and streaming responses**, ensuring incoming chunks updated the correct message without unnecessary component re-renders or UI inconsistencies.
- Optimized real-time rendering during high-frequency streaming updates using **React performance techniques such as memoization, controlled state updates, and efficient component rendering**, improving responsiveness during long-running conversations.
- Integrated the chat frontend with backend services for **conversation creation, message submission, streaming responses, conversation history, and error recovery**, while providing clear UI feedback throughout asynchronous operations.
- Developed resilient chat UX for real-world scenarios including **network failures, interrupted streams, delayed responses, empty/error responses, reconnect/retry flows, and disabled input states during processing**.

Full Stack Developer | Botminds AI, North Carolina

Mar 2025 – Oct 2025

- **Designed and developed production-grade Document AI applications using React, Next.js, Angular and Node.js**, building reusable frontend components, document-processing workflows, dynamic forms and enterprise dashboards.
- Built scalable **shared component libraries using React, Angular, Tailwind CSS and Material UI**, reducing frontend code duplication by **40%** and improving consistency across applications.
- Implemented **Next.js SSR, SSG and dynamic imports**, improving SEO and reducing initial page-load time by **25%** while optimizing the user experience across application routes.
- Architected complex frontend state using **Redux Toolkit, React Context, custom hooks, Angular services and RxJS observables**, enabling predictable state management across data-intensive workflows.
- Optimized frontend performance using **React Profiler, Angular DevTools, Lighthouse, lazy loading, route-based code splitting and image optimization**, improving Core Web Vitals and application responsiveness.
- Developed comprehensive **unit and end-to-end test automation using Playwright, Vitest and Angular TestBed**, reducing manual QA effort by **35%** and improving release confidence.
- Integrated frontend applications with **REST and GraphQL APIs** and collaborated with backend and DevOps engineers to define API contracts and support reliable end-to-end application workflows.
- Partnered closely with **UX designers and product teams** to transform Figma designs and business requirements into responsive, pixel-accurate production interfaces.

Software Engineer | Kivyo Inc., Texas

Jun 2024 – Feb 2025

- **Designed and developed end-to-end enterprise web applications using React, Angular, Java and Node.js**, building reusable components, dynamic forms, dashboards and role-based user experiences.
- Developed and integrated **RESTful APIs using Java and Node.js** to support authentication, validation, business logic and reliable communication between frontend and backend services.
- Architected frontend state management using **React Hooks, Context API, Redux Toolkit and Angular services with RxJS**, ensuring predictable data flow across complex application workflows.
- Built secure application experiences using **role-based access control, protected routes, authentication and session management**, restricting functionality based on user permissions.
- Optimized frontend and API interactions through **efficient data-fetching strategies, reduced unnecessary re-renders and improved API response handling**, enhancing overall application responsiveness.
- Developed **unit, integration and end-to-end tests** to validate critical application workflows and reduce regression issues during releases.
- **Refactored legacy application components and codebases** to improve maintainability, readability and scalability while supporting ongoing feature development.
- Collaborated with **product managers, UI/UX designers and engineering teams** to translate business requirements and Figma designs into production-ready functionality while documenting application architecture and API contracts.

Research Assistant | Texas A&M University–Corpus Christi, Texas

Jun 2023 – Apr 2024

- **Designed and developed NLP pipelines using Python, SpaCy and Neo4j**, transforming academic datasets into structured knowledge graphs for downstream research and analysis.
- Experimented with **Large Language Models for text summarization and semantic clustering**, evaluating model behavior and applying NLP techniques to research datasets.
- Developed custom **tokenization and Named Entity Recognition (NER)** workflows to identify and extract domain-specific information from scientific documents.
- Built applied AI prototypes using **TensorFlow and Keras**, including computer-vision models for an autonomous robotic harvesting system that achieved **92% accuracy in object-detection trials**.

- Integrated trained machine-learning models with **Flask APIs** to support interactive applications and visualization of model predictions.
- Performed data preprocessing, experimentation and analysis using **Python, NumPy, Pandas and Matplotlib**, documenting model configurations and results to ensure reproducibility.
- Supported deployment of research workloads on university compute infrastructure using **Docker and SLURM**, while collaborating with professors and researchers on applied AI initiatives.

Junior Software Engineer | Unlimited Innovations India Pvt. Ltd., Chennai, India

Oct 2020 – Jun 2022

- **Designed and developed ReactJS-based enterprise dashboards and responsive web applications** for U.S. healthcare and insurance clients, integrating frontend applications with SQL-backed services and REST APIs.
- Built reusable **data-visualization components including pivot tables, interactive charts, dynamic graphs and Excel-like data grids**, supporting complex reporting and analytics workflows.
- Developed advanced grid functionality including **filtering, sorting and conditional formatting**, enabling users to efficiently explore and analyze large business datasets.
- Integrated frontend applications with **ASP.NET and Node.js APIs**, supporting secure and consistent data exchange between client-side interfaces and backend services.
- Implemented scalable frontend state management using **React Hooks and Context API**, simplifying shared state and application logic across multi-view dashboards.
- Improved application performance through **lazy loading, memoization and component re-render optimization**, delivering more responsive experiences across complex dashboards.
- Implemented **role-based authentication, user-management functionality and secure session handling** to protect application functionality and data based on user permissions.
- Developed and executed **unit and integration testing** for critical application components while supporting reliable releases and production stability.
- Collaborated directly with **UI/UX designers, clients and cross-functional Agile teams** to clarify requirements, demonstrate completed features and deliver sprint commitments.

EDUCATION

Master of Science (M.S.), Computer Science

Texas A&M University–Corpus Christi, TX | Aug 2022 – May 2024 | GPA: 3.5

Bachelor of Technology (B.Tech.), Computer Science & Engineering

SRM Institute of Science and Technology, Chennai | Jun 2016 – May 2020 | GPA: 3.8

PROJECT & RESEARCH

- Red Point (Blood Donor Connection) — Led a MERN-stack web/mobile application using ReactJS, Material UI, Node.js, Express.js and MongoDB; collaborated with Rotaract Clubs on launch stakeholders.
- Sign Language Detection & Recognition — Built an American Sign Language recognition project using Python, Keras and TensorFlow; associated paper published in JETIR, Volume 7, Issue 5 (May 2020).