Stafny Velitia Karkada

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EDUCATION

MS in Computer Science: Northeastern University *(Boston, MA,USA)* — Apr 2025
Bachelor of Engineering in Computer Science: NMAM Institute Of Technology *(Karnataka, India)* — Aug 2020

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, C++, C, Python, Java
Web Technologies: React, React Native, Angular, Vue, Next.js, HTML, CSS, SASS, ES6, CMS, Bootstrap, jQuery, React Context API, Jest, Enzyme, React Testing Library, Cypress, Playwright, axe-core, WAVE, Material UI, Figma, AJAX, A/B Testing
Backend Technologies, AI & ML: Node.js, Express, REST APIs, GraphQL, MySQL, PostgreSQL, MongoDB, Firebase, Oracle DB, Neo4j, PHP, FastAPI, Docker, Kubernetes, Google Cloud Platform (GCP), SaaS, Swagger, Postman, Bitbucket, GitHub, Redux, CloudSim, OAuth 2.0, JWT, Google Maps Platform, Jira, Confluence

EXPERIENCE

Graduate Web Engineering Assistant, Northeastern University *(Boston, USA)* — Oct 2024 - May 2025
- Delivered live coding sessions across workshops, mentored 140+ students, provided real-time debugging support, and automated grading and feedback to streamline the learning process.
- Mentored 50+ student teams in building end-to-end, multi-user applications with WebSockets and AI integration.

Frontend Engineer Intern, Autodesk *(Boston, USA)* — May 2024 - Sept 2024
- Led a comprehensive Accessibility audit of the Autodesk Developer Portal, identifying 100+ issues using Axe DevTools, WAVE, and Accessibility Insights, and fixing violations with axe-core, axe-jest, Playwright, and Cypress.
- Revamped Autodesk's Developer Portal website, improving usability, engagement and performance by 60%. Implemented features that enabled customers to create teams, enhancing collabration.
- Created centralized accessibility documentation and presented key findings to design, engineering, product, and design system teams shaping development practices and driving company-wide a11y adoption.

Software Engineer,Y Media Labs *(Bangalore, India)* — Sept 2020 - Aug 2023
- Enhanced California Pizza Kitchen's website, reducing user clicks by 75%, boosting conversions by 2.5x, and doubling loyalty sign-ups. Leveraged React Hooks, lazy loading, and bundle optimization; effort recognized by their CMO.
- Developed and implemented comprehensive **accessibility and SEO features** within a fast-paced, one-month sprint in a 2-person Agile team. Improved semantic HTML, canonical URLs, meta tags, and optimized Core Web Vitals.
- **Led a team of 4** to integrate GPT-3 into company website, enabling AI-driven dynamic response to user inputs.
- Engineered a proprietary React-based **Design System** using Storybook and tokenized theming, increasing production efficiency by 70%, streamlining project timelines, and reducing team size requirements by 60%.
- Built a full stack **white-labeled** B2B web solution for Clover Payments using Vue, Node.js, and MongoDB, enabling rebranding for 20+ clients. Wrote unit tests with Jest and React Testing Library to ensure reliability.
- Built a **CMS-integrated** Next.js site for WeTransfer using GraphQL and Contentful, enabling the marketing team to independently manage content using headless CMS, reducing developer dependency and accelerating time-to-market.
- Built an in-house **React Native** mobile app for health tracking, using Firebase Firestore, Firebase Cloud Messaging (FCM) for push notifications, and Google Analytics to track feature adoption and engagement metrics.
- Deployed a data-heavy website using **Redux** for state management, implemented efficient pagination and client-side caching to optimize load times. Set up SonarQube in the Jenkins CI/CD pipeline for continuous code quality checks.

PROJECTS & ACADEMIC RESEARCH

HealthPlan API Platform | *Elasticsearch, Redis, RabbitMQ, Kibana, JWT, Node.js, Express*
- Developed high-performance RESTful APIs using Node.js, integrating Redis and Elasticsearch to reduce query latency by 40% through optimized indexing and caching strategies.
- Engineered an asynchronous RabbitMQ-based messaging pipeline capable of handling 500+ concurrent requests with sub-200ms response times and 99.9% system uptime under load.

Wyckoff AI Trading Bot | *Next.js ,TypeScript, Tailwind CSS, Python, LLMs, Docker*
- Built an AI chatbot to help traders understand Wyckoff's principles. Used LSTM networks for analyzing market data and predicting phases like accumulation and distribution.
- Experimented with Neo4j Bloom and Amazon Bedrock to enhance the chatbot's capabilities, using Neo4j Knowledge Graph to model trading concepts and AWS Lambda to process user queries and provide graph-based insights.