Manikantan Eakiri Lakshmanan
Software Engineer | Full Stack Developer | Web Developer | iOS Developer
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SUMMARY

Results-driven **Full Stack & iOS Software Engineer** with 2+ years of experience building **scalable, high-performance web and mobile applications** using **Swift**, **SwiftUI**, **React.js**, **Node.js**, and **Spring Boot**. Proficient in **cloud computing**(AWS, GCP, Azure), **CI/CD pipelines** (Docker, Kubernetes, Jenkins), and **machine learning integration** with **Core ML**. Adept at designing **accessible, WCAG-compliant interfaces** that enhance usability for diverse users, including those with disabilities. Proven success improving **app efficiency**, **data reliability**, and **deployment automation** in **Agile environments**.

TECHNICAL SKILLS

Languages: JavaScript, TypeScript, Python, Swift, Java, PHP, SQL, HTML5, CSS3
Frontend: React.js, Redux, Next.js, Tailwind CSS, Bootstrap, SwiftUI
Backend / API: Node.js, Express.js, Spring Boot, GraphQL, RESTful Services
Databases: MySQL, PostgreSQL, MongoDB, Firebase, Google BigQuery
Cloud & DevOps: AWS (EC2, Lambda, S3), GCP (Cloud Functions, Firestore), Azure, Docker, Kubernetes, Jenkins, GitHub Actions
Testing: Jest, Cypress, JUnit, Selenium, Postman, XCTest
Version Control & Agile: Git, GitHub, Bitbucket, GitLab, Jira, Confluence, Scrum / Kanban
Mobile Development: Swift (iOS), React Native, Firebase Auth, Core ML, API Integration

PROFESSIONAL EXPERIENCE

National Technical Institute for the Deaf (NTID) | Rochester, NY　　　　　　　　**Jun 2023 - May 2024**
iOS Developer (Accessibility Focus)
- Built accessibility-focused iOS app using Swift and SwiftUI, improving efficiency 45% for hearing-impaired users.
- Integrated Core ML speech recognition, improving transcription accuracy 25% and cutting latency 40%.
- Improved synchronization speed 35% using Firebase Authentication and Firestore, strengthening data reliability.
- Reduced CPU usage 40% through Swift performance profiling and runtime optimization.
- Enhanced navigation via MVVM architecture, decreasing user task time 20%.
- Mechanized delivery pipelines with Fastlane and XCTest, halving QA verification cycles.
- Implemented inclusive designs compliant with WCAG 2.1, improving accessibility metrics across all devices.

IBM Corporation, India　　　　　　　　**Feb 2020 - Aug 2020**
Full Stack Developer
- Built scalable microservices with Spring Boot and React.js, increasing system performance 50%.
- Reduced query time 40% through SQL indexing and MongoDB aggregation optimizations.
- Computerized testing using Cypress and Jest, increasing defect detection 30%.
- Secured APIs with OAuth 2.0 and JWT, reducing unauthorized access 20%.
- Introduced Jenkins pipelines, enabling weekly releases with zero downtime.
- Developed REST APIs for external integrations, improving interoperability across business systems.
- Delivered consistent sprint outcomes within Agile cycles, maintaining 95% on-time delivery.

EDUCATION

Master of Science (MS): Software Engineering　　　　　　　　**May 2025**
Associate in Applied Science (AAS): Applied Computer Technology　　　　　　　　**May 2024**
Rochester Institute of Technology USA
Bachelor of Technology (B.Tech): Computer Science and Engineering　　　　　　　　**May 2019**
Kalasalingam University India

PROFFESIONAL PROJECT

ASL-to-Text Dictionary – Real-Time Gesture Recognition Web App - Developed a real-time **ASL gesture recognition web application** using **MediaPipe**, **TensorFlow.js**, **Flask**, and **OpenCV**to translate American Sign Language gestures into English text. Implemented **LSTM-based deep learning** for accurate gesture-to-text conversion with **real-time webcam input**. Designed a **responsive web interface** and integrated a **Python backend** for model processing, enhancing **accessibility for Deaf users** through seamless **sign-to-text communication**.

Visitor Website – Dynamic Booking and Management System - Developed a **PHP-based booking system** with secure **admin login** and real-time updates using **AJAX** and **MySQL**. Designed **user registration** and **reservation forms** with input validation and dynamic **database connectivity**. Built an **admin dashboard** for managing bookings and user data with **login authentication** and role-based access. Integrated an **accessibility widget** for users with visual, hearing, and motor impairments, ensuring **ADA-compliant** and inclusive design. Utilized **HTML5, CSS3**, and **JavaScript** to create a **responsive and accessible interface** for seamless booking experiences.