

VAIRAVAN LAKSHMANAN

Senior Full Stack Engineer · Cloud-Native Architecture · AWS · Generative AI

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PROFESSIONAL SUMMARY

Visionary Lead Full Stack Engineer and **AWS-Certified Cloud Architect** with **10 years of experience** engineering large-scale, cloud-native distributed systems. Certified in both **AWS Solutions Architecture** and **Generative AI Development** — with hands-on experience designing AI-augmented product features, cloud-first architectures, and intelligent automation pipelines. Currently owning the **Delta Airlines in-flight Wi-Fi Portal** — a mission-critical distributed system serving **100M+ sessions across 900+ aircraft** — architecting solutions with AWS services (Lambda, DynamoDB, API Gateway, CloudWatch, X-Ray) at every layer of the stack. Brings a rare combination of deep frontend mastery (Angular, NX, NgRx) and cloud infrastructure fluency to architect end-to-end solutions that are **performant, scalable, observable, and AI-ready**. Proven leader in mentoring engineering teams, authoring RFCs, driving cross-functional design reviews, and aligning technology decisions with business outcomes.

PROFESSIONAL EXPERIENCE

Senior Developer II (Lead) · Delta Airlines

Nov 2022 – Present Bangalore, India

- Owned end-to-end product delivery of the in-flight Wi-Fi Portal serving 100M+ sessions and 115K+ daily active users across 900+ aircraft, driving all decisions from architecture to deployment.
- Architected cloud-native solutions on AWS — designing scalable BFF patterns, distributed caching, event-driven flows, and leveraging Lambda, DynamoDB, API Gateway, CloudWatch, and X-Ray — ensuring high availability, observability, and resilience in satellite-constrained environments.
- Designed and evaluated GenAI-powered features and intelligent automation strategies to enhance portal personalization, predictive connectivity alerts, and AI-assisted developer tooling within the platform.
- Led Nx monorepo migration and Angular upgrade, elevating code coverage from 68% → 90%, eliminating 580 lint errors, and reducing cyclomatic complexity from 12 → 4 — cutting regression issues by 38% and Wi-Fi failures by 3.5%.
- Architected a Service Worker-based caching system that reduced server bandwidth by 18%, and engineered a content-split strategy shrinking the frontend build from 22MB → 5MB — cutting regression testing time by 20%.
- Spearheaded client bundle delivery optimization (~60% size reduction), reducing initial load time from ~6s → ~3s in low-bandwidth satellite environments.
- Delivered MVP for free Wi-Fi on Delta Regional Flights within 2.5 months, contributing directly to a measurable CSAT increase for the airline.
- Led re-login flow optimization that drove a 26.3% month-over-month increase in user engagement across the portal.
- Authored SSO architecture proposals, design documents, and RFCs; contributed to Delta's Aura design system with reusable UI components adopted across multiple teams.
- Conducted technical interviews, onboarded new hires, and led clean code & Angular best practices training sessions across the team.
- Selected for Delta's Re-Guild cross-functional initiative (Fall 2025) — a delta-wide reliability and observability program — architecting a PoC solution using AWS OpenSearch Service to address critical observability gaps, earning the Valuable Contributor Award for the engagement.
- Recognized with the Gold Award (Delta Airlines) for sustained engineering excellence and high-impact delivery.

Senior Developer I · Kaplan Test Prep

Feb 2020 – Nov 2022 Bangalore, India

- Architected and delivered features across Angular, NgRx, RxJS, NX, Apollo GraphQL, AWS, Node.js, GoLang, and PostgreSQL for a large-scale North American Education platform serving multiple user personas (Author, Admin, Student).
- Led development of PoCs for Discussion Forums and Chatbot integrations, expanding platform capabilities and improving learner engagement.
- Conducted knowledge-transfer sessions on Git workflows and NgRx state management, upskilling the broader team.
- Participated in architectural discussions, design reviews, and release planning; led niche feature releases end-to-end.
- Reviewed code from junior and peer engineers and mentored junior developers on platform technologies and best practices.
- Recognized with the Kaplan Star Award for outstanding contributions to the platform.

Senior Frontend Developer · Soliton Technologies

Feb 2018 – Feb 2020 Bangalore, India

- Built enterprise data storage and analysis applications for the semiconductor industry using Angular 2+, NgRx, and Angular Material.
- Drove quality assurance processes — identifying, reporting, and resolving bugs — while reviewing peer code and guiding junior developers.
- Recognized with the Enthusiast Award for high productivity, team contribution, and consistent delivery quality.

Frontend Developer · Soliton Technologies

Mar 2016 – Feb 2018 Bangalore, India

- Developed a semiconductor chip evaluation framework using Angular and Node.js, collaborating with clients on design requirements and iterating rapidly to deliver optimal UX.
- Coordinated with cross-functional developers to identify inefficiencies and completed front-end tasks to ensure high user accessibility standards.
- Delivered Second Runner-Up performance in the internship project competition, demonstrating strong early technical capability.

TECHNICAL SKILLS

Frontend	Angular (v2–v21), React, TypeScript, JavaScript (ES6+), HTML5, CSS3/SCSS, NX Monorepo, RxJS, NgRx, Redux
Backend	Node.js, GoLang, GraphQL (Apollo), REST APIs, Microservices, BFF Pattern, Express.js
AWS Cloud	Lambda, DynamoDB, API Gateway, S3, SQS, SNS, CloudWatch, X-Ray, CDK, Cognito, IAM — Solutions Architect Certified
Generative AI	LLM Integration, Prompt Engineering, AI-augmented Dev Workflows, AWS Bedrock, GenAI API Design — Gen AI Developer Certified
Architecture	Cloud-Native Design, Distributed Caching, Event-Driven Systems, Service Workers, Monorepo Design, Design Systems, RFC Authoring
Testing & Perf.	Jest, Jasmine, Karma, Artillery (Load Testing), Lighthouse (Performance Auditing), AWS X-Ray (Tracing)
Databases	PostgreSQL, MongoDB, DynamoDB, Redis, Valkey
Practices	Agile/Scrum, Design Thinking, Code Review, Technical Mentoring, Cross-functional Leadership

AWARDS & RECOGNITION

Gold Award — Delta Airlines
Valuable Contributor Award — Re-Guild, Delta Airlines
Kaplan Star Award — Kaplan Test Prep

Second Runner-Up — Internship Project, Soliton
Enthusiast Award — Soliton Technologies

EDUCATION & CERTIFICATIONS

Bachelor of Engineering (Electronics & Communication)
Karpagam College of Engineering, Anna University · 2012 – 2016

Certifications
▶ AWS Certified Solutions Architect – Associate · Valid through Feb 2029
▶ AWS Certified Generative AI Developer – Professional · Valid through May 2029