MADAN DEIVASIGAMANI

Staff Software Engineer · Full-Stack & Distributed Systems · 16+ Years Building Products Used by Millions

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SUMMARY

I solve difficult engineering problems at scale. Over the past 16+ years, I've built and modernized platforms used by millions of users across Cisco, PayPal, and Tesco from embedded operating systems and OTT platforms to cloud-native marketplaces, GraphQL platforms, and enterprise AI solutions. My focus is on distributed systems, AI infrastructure, and building software that is reliable, scalable, and delivers measurable business impact. I enjoy working where architecture, product, and engineering meet, turning ambitious ideas into production systems

SKILLS

Languages: JavaScript / TypeScript, Python, Java, C#, Rust

Backend & APIs: FastAPI, Node.js, Express, GraphQL (Apollo Federation), Spring Boot, Kafka, Redis, RabbitMQ, WebSockets, microservices

Frontend: React, micro-frontends (Module Federation), React Native, Angular, D3, HTML5/CSS3

AI / GenAI: LLM integration, agentic workflows (LangChain, LangGraph, LlamaIndex), vector databases, RAG pipelines

Data: PostgreSQL, MySQL, MSSQL, MongoDB, DynamoDB, Spark, Elasticsearch

Cloud & DevOps: AWS, GCP, Azure, Docker, Kubernetes, Jenkins, GitHub Actions, CI/CD, OpenTelemetry, Splunk

EXPERIENCE

Tesco · Bengaluru, India — Jun 2024 – Present

Staff Software Engineer

- Developed autonomous AI agents for marketplace use cases, orchestrating enterprise services and business workflows to automate complex user interactions and operational tasks.
- Led the platform shift from a single-seller retail model to a **multi-seller marketplace**, enabling third-party seller onboarding and price competition; the modernization contributed to a **~30% improvement in online retail profitability**.
- Drove consolidation of multiple Backend-for-Frontend services into a single **federated GraphQL platform** serving web, mobile, and in-store apps — simplifying data access and accelerating feature delivery across teams.
- Shape engineering standards through architecture reviews and governance: system design, service ownership, performance optimization, and platform maintainability.
- Strengthened observability with improved synthetic testing and diagnostic tooling, cutting time-to-detection for production issues.

PayPal · Bengaluru, India — Jul 2020 – Jun 2024

Software Engineer 3

- Built and operated **PayPal Insights** end to end — a merchant analytics product serving **~600K daily active users** — including a fully customizable dashboard for personalized data views.
- Cut transaction-screen load time by **40%** through caching, micro-frontends (Webpack Module Federation), and time-based filtering over big-data pipelines (BigQuery, Spark).
- Delivered high-volume reporting for enterprise merchants including **Uber and Intuit**, processing large-scale transaction data.
- Mentored a team of **10 engineers** and drove cross-team widget reuse through a shared micro-frontend architecture.

Cisco (Cisco Video Technologies) · Bengaluru, India — Jul 2013 – Jul 2020

Software Engineer III

- Turned a hackathon-winning idea into a shipped product deployed to **25 million set-top boxes**.
- Led a **25-member team** delivering **Evolution**, an end-to-end OTT platform (broadcast, PVR, VOD) comparable to Prime Video and Hotstar, with high-scalability frontend and backend.
- Ported **Node.js to MIPSEL embedded devices**, setting the organization's direction toward Node.js runtimes on constrained hardware; earned org-wide recognition.
- Served as Solution Expert for the **Infinite Platform**, a hybrid-cloud (public + on-prem) end-to-end video experience solution.
- Optimized embedded Chromium / Node.js runtimes for memory, stability, and responsiveness on resource-constrained Linux devices; built CI/CD and automation frameworks across device variants.

Harness Handitouch · Chennai, India — Jan 2012 – Jun 2013

Development Team Lead

- Architected and built an HTML5 collaborative-classroom product on **Azure** from scratch — Canvas, WebSockets, custom video/audio broadcasting, and D3 visualizations — with a native-like experience across tablets and desktops.

- Represented the company in the **Microsoft Accelerator** program; product earned **TechSparks** and **Quest Prize (top 3)** recognition.

Earlier Roles 2008 – 2012

- **Senior Module Lead, Saadhvi Technology** (2011–12): built MediaValet, an Azure cloud digital-asset-management platform handling **200 GB media files** and multi-format video transcoding; product won the **Microsoft Impact 2011** award.
- **Co-Founder, Phoenix Innovative Technology** (2009–11): founded and ran a web products and services company; owned architecture, delivery, and customer relationships.
- **Project Assistant, IIT Madras** (2009): designed sensor circuits and microcontroller algorithms for a medical-training mannequin simulating CPR and blood transfusion emergencies.
- **Web Developer, Speedstep** (2008–09): built cross-browser UI for a global textile-industry ERP.

AWARDS & RECOGNITION

- **Winner, Sequoia Capital Hackathon 2014** — machine-learning-driven interactive advertising; competed against 500+ teams.
- **Winner, Microsoft #Cloud Challenge**, IIM Bangalore Vista 2014 — first among 50+ teams.
- **Winner, Microsoft Ventures Hackathon 2013**; graduate of the Microsoft Ventures Accelerator.
- **Winner, Coalescence business contest**, BITS Pilani Goa 2014 — first among 100+ teams; winner, Cisco internal B-Plan competition.

CERTIFICATIONS & EDUCATION

- **AWS Certified Developer – Associate** (DVA-C02)
- **OpenTelemetry** (Linux Foundation LFS148)
- **B.E., Electronics & Communication Engineering** — Anna University (2004–2008)