

Amirtharaj Senthilkumar

✉ theamir10@gmail.com | 📞 +91 9976632010 | 🌐 amirtharaj-rs

PROFESSIONAL SUMMARY

Senior Software Development Engineer with 8+ years of experience at **HP R&D**, building scalable **distributed systems** and **data ingestion pipelines** using **Java (Spring Boot)**. Proven expertise in system design, high-availability microservices, and secure production code integrated with **AWS S3, PostgreSQL, and messaging systems (SQS/MQTT)**. Hands-on experience with **cloud-native architectures**, containerized deployments (Docker/EKS), CI/CD pipelines (Azure Devops and Jenkins), and operational stability practices. AWS Certified Solutions Architect with deep knowledge of event-driven architectures, performance optimization, and SDLC best practices.

TECHNICAL SKILLS

Languages:	Java (Spring Boot, Hibernate), Go Lang, Node.js, C#
Distributed & Streaming:	Microservices, Apache Kafka, Rabbit MQ, AWS SQS, MQTT
Data Sources & Storage:	PostgreSQL, MS-SQL, MongoDB, Redis, AWS S3
Infrastructure/Cloud:	AWS (20+ Services), Docker, Kubernetes, Terraform
Architecture & SDLC:	System design, design docs, code reviews, testing, CI/CD, Agile/Scrum
AI & Machine Learning:	LLMs, Prompt Engineering, AI-Driven Development, GenAI Agents
Tools & Practices:	Jenkins (CI/CD), Git, Azure DevOps, Splunk, Data Dog JMeter

WORK EXPERIENCE

HP Inc R&D, Bangalore — Total Tenure: Jan 2018 – Present

Senior Software Development Engineer (SDE3) Jan 2024 – Present

Project: FedRAMP Printer Fleet Management

- Architected and developed **5 high-availability microservices** in **Java, Spring Boot, and PostgreSQL**, scaling scheduled data collection for **3M+ printers**.
- Led a **3-developer** team, owned design reviews and production readiness, and mentored interns into full-time roles while maintaining sprint delivery.
- Built a custom **Splunk triage dashboard** that cut root-cause analysis time from **2 hours to 30 minutes**.
- Migrated a **Node.js** microservice to a **Java** microservice using an **AI agent** and **Spec-Driven Development**, delivering in **2 weeks** versus an estimated **1.5 months**.

Senior Software Development Engineer (SDE2) Jan 2021 – Dec 2023

Project: Smart Security

- Implemented a **distributed data processing microservice** in **Java Spring Boot** for **5M+ IoT printers**, using **MongoDB** pipelines and **Redis** caching for low-latency reads.
- Built an automated **cloud resource lifecycle orchestrator** across **AWS RDS, ECS, and ElastiCache**, reducing annual cloud OpEx by **26%**.
- Implemented a standardized **error taxonomy and monitoring framework** across the microservice ecosystem, reducing **MTTR** by **50%**.

Software Development Engineer I & Intern Jan 2018 – Dec 2020

Project: Print At Your Service

- Developed scalable REST APIs in **.NET Core** to orchestrate billing data ingestion for **30K+ printer devices** with high-volume parallel processing.
- Migrated **4 enterprise monoliths** into a **containerized AWS EKS environment** with multi-AZ auto-scaling which helped cutting billing processing time by **28% (14 min → 10 min)**. Used **Kubernetes** and **Terraform** for maintaining infrastructure of Microservices in AWS environment.
- Led **DB migration from MS SQL to PostgreSQL**, reducing monthly infrastructure cost from **\$201** to **\$132**.

ACHIEVEMENTS

- Hackathon Winner** – HP Bangalore Tech Event
- Employee of the Month** – HP Inc R&D
- Introduced **Spec-Driven Development** and helped drive **Development adoption** across the office

CERTIFICATIONS

- AWS Certified Solutions Architect – Associate** *Amazon Web Services (AWS)*
- AI Fundamentals & Prompt Engineering for Developers** *DataCamp*

EDUCATION

- 2014 - 2018 **B.Tech, INFORMATION TECHNOLOGY** at Thiagarajar College of Engineering (CGPA: 8.3/10.0)