

AKSHAY P M

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Senior IoT & Edge Platform Engineer — Remote-Ready — AWS · Java · Python · Kubernetes · MQTT · Greengrass

PROFESSIONAL SUMMARY

IoT & Edge Platform Engineer with 10+ years designing and scaling cloud-native IoT platforms in regulated healthcare and enterprise environments. Deep expertise in device lifecycle management, edge-to-cloud integration, fleet operations, and container security on AWS and Kubernetes. Leads teams of up to 10 engineers end-to-end from architecture through production.

CORE SKILLS

IoT & Edge: AWS IoT Core · AWS Greengrass · MQTT · CoAP · LoRaWAN · 6LoWPAN · Device Lifecycle Management · Fleet Management · Zero-Touch Provisioning · Edge Orchestration · IIoT · Telemetry Pipelines

Cloud & Infra: AWS (EC2, Lambda, Kinesis, SQS, DynamoDB, S3, API Gateway, CloudWatch) · IAM · Microservices · Kubernetes · Docker · Terraform · CI/CD · GitHub Actions · Serverless

Languages: Java (Spring Boot) · Python (Django, Flask)

AI & Data: RAG · LLM Agent Workflows · Grafana · Observability · PostgreSQL · Kafka/Kinesis · Datadog

Remote Work: Async collaboration · Distributed team delivery · Cross-timezone management (US · EU · IN)

Certifications: AWS Solutions Architect Associate — Score 920/1000 (2020)

PROFESSIONAL EXPERIENCE

Staff Software Engineer — IoT Platform — GE Healthcare, Bangalore Sep 2025 – Present

1. Architecting RAG-based observability assistant indexing 3 data sources (OpenTelemetry traces, Grafana logs, operational runbooks) — enabling engineers to diagnose production incidents via natural language in a regulated healthcare environment.
2. Optimized edge gateway provisioning endpoint latency from 30s to under 4s and reduced manual provisioning inputs from 10–12 steps to 1 — enforcing least-privilege IAM policies, mTLS with X.509 certificate-based device authentication over MQTT on K3s/Kubernetes, targeting full zero-touch automation.
3. Hardened 10–15 container images across IoT edge services using multi-stage Dockerfiles with distroless final stages — enforcing automated scan gates via Twistlock in CI/CD pipelines.
4. Blocked vulnerable or unsigned images from edge deployment via cosign signature verification and Kyverno admission policies on K3s clusters.
5. Leading 10 engineers across backend and edge layers — driving architecture decisions, design reviews, and delivery of gateway onboarding, container security, and edge-to-cloud integration features.
6. Technologies: AWS IoT Core, Greengrass, Java, Spring Boot, Python, Kubernetes, MQTT, Grafana.

Senior Software Engineer — IoT & Edge (Remote) — JLL Technologies, Bangalore / Remote Jul 2023 – Sep 2025

1. Delivered backend and IoT platform components across US and European time zones through autonomous async workflows.
2. Designed and implemented RAG and agent-based LLM workflows for JLL GPT — enabling natural-language querying of internal documents and quarter-over-quarter business metrics by integrating LLM agents with structured enterprise data sources.
3. Operated production Smart Building IoT platform (Edge-Insight, Edge-Sense) — managing 500+ edge gateways across multi-region AWS IoT Core deployments with 100+ sensors per site publishing MQTT telemetry at 200+ messages/sec across 9–10 topics.
4. Secured deployments with IAM least-privilege policies and KMS encryption at rest — implementing SQS-based dead-letter queuing for failed message recovery across gateway fleet.
5. Reduced AWS infrastructure deployment time by 40% by implementing Terraform and SaltStack automation across dev, staging, and production environments — standardizing environment provisioning and eliminating manual configuration drift.
6. Implemented Grafana dashboards for real-time IoT telemetry monitoring — improving production incident detection speed by 30% through centralized observability across edge gateway fleet.
7. Stack: Python, Django, AWS (EKS, SQS, S3, Kinesis), Kubernetes, Docker, Terraform, Grafana, MQTT, PostgreSQL.

Chief Engineer — SmartThings Platform — Samsung R&D Institute India, Bangalore Jan 2023 – Jul 2023

1. Drove 40% improvement in event processing throughput on SmartThings by redesigning AWS architecture and optimizing Kinesis-based event pipelines — enabling higher sustained load across millions of connected devices.

Senior IoT Consultant → Senior Consultant — Deloitte USI Consulting, Bangalore Apr 2019 – Dec 2022
McDonald’s BRE IoT Platform:

1. Owned end-to-end backend architecture and implementation for McDonald’s drive-thru IoT platform deployed across 1,000+ US locations — integrating AWS IoT Greengrass, Lambda, and edge devices for real-time data processing at the edge; reduced data latency by 25%, improving operational responsiveness at scale.

Smart Factory Health Check (SFHC):

1. Served as end-to-end technical owner of serverless stack (AWS Lambda, PostgreSQL) — led system design, backend development, and security reviews while managing 3–4 client stakeholders through delivery lifecycle.

Spirit AeroSystems:

1. Led 10-engineer cross-functional team across two verticals — engineered Data Simulator Ingestion Engine that decoupled backend development from client data dependency, enabling faster delivery cycles and comprehensive integration testing.
2. Tools: AWS IoT, Greengrass, Lambda, Python, Docker, Kubernetes, Terraform, PostgreSQL.

IoT Developer — Smarten Spaces, Bangalore

Dec 2017 – Apr 2019

1. Created beacon-based indoor navigation system achieving 90% location accuracy — implementing BLE triangulation algorithms, Python REST APIs, and OpenStreetMap integration for spatial rendering.

Software Engineer — IoT & Cloud — Incedo Inc., Bangalore

Mar 2017 – Nov 2017

1. Developed backend components for Cisco EFF Cloud, a no-code IoT platform — delivering IoT integration capabilities for an Oil & Gas industry client.

Project Assistant — IoT Wireless Protocols — Networks Lab, IISc, Bangalore Jun 2015 – Dec 2016

1. Designed IoT networking solutions using 6LoWPAN and RPL routing protocols — wrote Contiki OS firmware for campus-scale wireless sensor network deployments at IISc.
2. Published peer-reviewed research in IEEE IoT Journal on scalable IoT network designs; co-authored IETF RFC specification on IPv6 6LoWPAN deterministic networks.

EDUCATION

B.E. Electronics & Communication — SBMSIT, VTU Belgaum

2008 – 2012

First Class — IEEE IoT Journal 2021 — IETF RFC co-author (6LoWPAN).

ACHIEVEMENTS

1. Outstanding Award, Deloitte USI (2022) — High-impact IoT solution delivery.
2. Applause Award, Deloitte USI (2021) — Independent technical leadership on Cisco ThingWorx.
3. IEEE IoT Journal (2021) — Peer-reviewed publication on IPv6 IoT network architectures.
4. AWS Solutions Architect Associate — Score 920/1000 (2020).
5. IETF RFC Co-author — Internet standard for 6LoWPAN deterministic networking.