Ravi Gyani

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Quick Summary

- Principal-level software engineer with 20+ years of experience across software engineering, including the design and operation of modern cloud-native platforms.
- Deep expertise in **AWS, serverless, event-driven architectures**, and large-scale data processing systems.
- Proven track record in designing high-performance, cost-optimized, and resilient distributed systems.
- Strong advocate of rapid validation through proof-of-concepts (POCs).

Technologies

- **Cloud (AWS):** IAM, EC2, S3, Lambda, Step Functions, Batch, API Gateway, AppSync, DynamoDB, IoT, EventBridge, CloudWatch, RDS, Aurora, Redshift, Glue, Athena, ECS, Elastic Beanstalk, CloudFront, Route 53, ECR, EMR, Kinesis, Greengrass, OpenSearch
- **Infrastructure & DevOps:** Docker, CDK, Terraform, Prometheus, Grafana
- **Big Data & Streaming:** HDFS, HBase, Kafka, Airflow, Flink, Spark, Redis
- **Programming Languages:** Python, Java

Certifications

- AWS Certified Security Specialty (SCS-C01) - Mar 2023,
- **AWS Certified Solutions Architect Professional (SAP-C01)** - Oct 2020
- AWS Certified Solutions Architect Associate (SAP-C02) – Oct 2020
- Databricks Certified Developer: Apache Spark 2.X – Jul 2019
- Confluent Certified Developer for Apache Kafka – Jul 2019

Career Highlights

Advocated and delivered an AI-first search experience.

- Designed and implemented an **NLP-driven interface for OpenSearch**, replacing traditional GUI filters with natural language queries
- Fine-tuned a lightweight seq2seq model on Claude 3 generated training data, deployed via horizontally scaling on AWS ECS for low-latency inference.
- **Automated model lifecycle**: dataset generation (Bedrock, S3), fine-tuning, containerization, and deployment, enabling rapid iteration as schema evolves.

Slashed Cloud Compute Costs by 90%

- Inherited an inefficient batch-processing workflow bleeding money using Airflow, EFS, S3 and AWS Batch.
- Re-architected using Step Functions, Batch, Spot Instances, and S3 runtime mounts.
- **Cut computing costs by 90%, while improving reliability and scalability.**

Replaced Monolith with Micro-services

- Rearchitected and replaced a legacy monolith with a cloud-native, auto-scaling architecture on Kubernetes (using KEDA).
- Optimized data throughput using AWS Kinesis and Pandas, slashing stock recalculation latency from 30 minutes to under 2 seconds
- Re-Designed the organization's go-to solution for real-time article data status, consolidating fragmented streams from various upstream services into a single, authoritative source of truth.
- Eliminated critical blind spots in article status tracking by delivering accurate, up-to-date data with minimal latency, directly enhancing operational decision-making

Replaced Legacy Product with National-Scale Big Data Platform

- Took ownership of a failing SQL Server-based location tracking system.
- Built a custom big data platform from scratch using Hadoop, HBase, Kafka, and Spark
- Delivered real-time national security subscriber profiling, scaling analytics across billions of location records.

Automated AMI Generation: 1 Day to 5 Minutes

- Manual AMI builds for a proprietary Windows workload were blocking delivery.
- Designed a fully automated AMI pipeline using Step Functions for orchestration.
- Leveraged AWS Sessions Manager for on-demand provisioning, usage monitoring, and automated cleanup.
- Reduced provisioning time from a full day to 5 minutes (the Windows boot up time), while lowering costs by releasing resources when CPU utilization dropped.

Created Custom Developer Tooling When Nothing Off-the-Shelf Worked

- Built a Grafana plugin in Go + Angular to integrate with MapR clusters.
- Built a custom Zeppelin interpreter to bridge Git workflows.
- Eliminated bottlenecks, made big data workflows dev-friendly, and shipped what vendors couldn't.

Automated CVE Detection & Container Hardening using AWS Inspector and CodePipeline

- Eliminated ~99% of container CVEs by designing an automated rebuild and promotion pipeline using AWS Inspector -> EventBridge -> Step Functions -> CodePipeline, to automatically detect, rebuild, test, compare outputs, notify and safely promote ECR images to production

Built Real-Time Federated ML Pipeline for Automotive Fault Detection

- **Leveraged Flower federated learning** with AWS IoT Core, ECS, and Greengrass to train models across distributed vehicle telemetry without centralizing sensitive data.
- Enabled real-time fault detection and fleet-wide model improvements, ensuring low-latency classification while preserving data privacy at the edge

Took Over Projects Others Dropped - and Delivered

- Whether it was rewriting pipelines, designing RBAC from Cognito internals, or refactoring critical services, delivered results where others got stuck.
- Reputed for "gets-it-done" in every client engagement.

Work Experience

Principal Engineer at Tradebyte (Zalando), Jan 2025– present

- Architected and led the transition from a tightly coupled monolith to a distributed, event-driven system, unlocking faster feature delivery and improved fault isolation.
- Spearheaded POCs and migration blueprints for AWS cloud adoption, aligning technology choices with business cost and performance goals.
- Influenced strategic technical direction by aligning architecture choices with long-term scalability and business growth.

Senior Solutions Architect at Luxoft GmbH, Munich, Jan 2021 – July 2024

- Consulted with clients including Amazon, BMW, Volkswagen, and Continental.
- Led cloud migrations, cost optimizations, and PoC architecture efforts.
- Mentored engineers and led internal training on CDK, Terraform, and serverless.

Solutions Architect — Polaris Wireless, Bangalore (Feb 2014 – Aug 2020)

- Architected a scalable location analytics platform for national security use.
- Led big data transformation from SQL Server to Hadoop, HBase, Spark.
- Developed a patented system for real-time subscriber profiling and location estimation (US20230050646A1), enabling scalable analytics for national security applications.

Software Engineer & Entrepreneur — Various / KNOCKS Solutions (2003 – 2014)

- Worked across mobile (iOS/Android), .NET WinForms, and C# development.
- Founded KNOCKS Solutions (2006–2009) and built a commercial .NET Winforms UI components suite with features like Outlook-style calendars, Visual Studio-style docking controls, and Office 2007- style ribbon interfaces.

Education

Bachelor of Engineering (Netaji Subhas Institute of Technology, Delhi) 1999-2003