

Subba Taniparti, MS, CKA, ADE

Phone: (814) 844-5012 Email: Staniparti@gmail.com

Principal / Lead AI Engineer with 12+ years of experience designing, deploying, and operating large-scale AI and Generative AI platforms on AWS. Specialized in Retrieval-Augmented Generation (RAG), LLM-based systems, production MLOps/GenAIOps, and cloud-native architectures using EKS, SageMaker, Step Functions, and event-driven orchestration. Proven technical leader delivering enterprise-grade, compliant GenAI solutions with strong focus on reliability, observability, and responsible AI in regulated environments.

PROFESSIONAL EXPERIENCE

MASTERCARD, Remote, NC

Sep 2025 – Present

Lead AI Engineer – AI Center of Excellence

- Led the development and production deployment of the MAP (MasterCard Assistant Platform) AI Service, including model-serving jobs, inference endpoints, Databricks assets, and production-grade configurations.
- Architected and deployed **production-grade Generative AI services** on AWS, supporting LLM-based inference workflows, secure model serving, and low-latency API access via EKS and event-driven orchestration.
- Designed and operationalized **RAG-style AI service runtimes**, integrating structured and unstructured data pipelines, retrieval workflows, and model orchestration for enterprise AI use cases.
- Built and hardened **GenAI guardrails**, including prompt protection patterns, safety filtering, and early PII/prohibited-content detection aligned with responsible AI standards.
- Led end-to-end **GenAIOps pipelines**, covering CI/CD, environment promotion, model runtime configuration, health checks, and observability using Datadog and Splunk.
- Partnered with data scientists and product teams to translate business workflows into scalable AI services, ensuring compliance, resilience, and consistent production behavior.
- Improved production stability by diagnosing and resolving systemic failures across **EKS workloads, service bindings, schema evolution, and environment-specific configuration**, resulting in sustained “green” deployments.
- Acted as technical lead for AI platform architecture, influencing engineering standards, deployment patterns, and runtime best practices across multiple teams.
- Optimized EKS deployments for MAP by improving workload readiness, health-check reliability, configuration accuracy, and container lifecycle behaviours.
- Strengthened environment and dependency management by validating versioning, runtime compatibility, and system-to-system communication for critical MAP components.

MASTERCARD, Remote, NC

Sep 2022 – Aug 2025

Senior Cloud Engineer – AI/ML Enablement & AWS Cloud Platform

- Led cloud engineering efforts for Mastercard’s South Africa SOIL enablement, ensuring AWS infrastructure, routing, and service configurations were production-ready to support mission-critical payment transactions.
- Supported full ML lifecycle operations, including deployment, performance monitoring, drift detection, feature freshness validation, and rapid remediation of issues such as failing DAGs, container crashes, and latency bottlenecks.
- Enabled secure, scalable AI platforms for regulated financial systems, ensuring high availability, low latency, and strict compliance requirements.
- Collaborated with AI/ML teams to standardize MLOps patterns, deployment workflows, and operational readiness for production AI systems.
- Designed and deployed ML-enabled and GenAI services on AWS (EKS, EC2, S3, IAM, VPC, Private Link), delivering secure, scalable, and compliant AI workloads supporting real-time decisioning and transactional systems.

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BAYER CROP SCIENCE, St. Louis, Missouri

May 2021 – Present

Senior Data Engineer – ML & Data Science Pipelines

- Built full vision-processing and IoT data pipelines across AWS/GCP to develop and operationalize a model that detects insect mortality from time-separated images, using S3, Lambda, Step Functions, Airflow, Big Query, and Dataflow.
- Built end-to-end Intelligent Data Processing pipelines for computer vision and IoT-based ML models, automating ingestion, feature extraction, and training dataset generation across AWS and GCP.
- Designed scalable pipelines for unstructured data processing, supporting model training and inference workflows using Airflow, Step Functions, S3, BigQuery, and Dataflow.
- Implemented SQL-based feature engineering pipelines in Snowflake to support ML experimentation and production deployment.

BAYER CROP SCIENCE, St. Louis, Missouri

Apr 2020 – May 2021

Cloud Data Engineer, Contractor

- Developed ingestion and transformation pipelines using Python, SQL, Redshift, S3, and Kafka.
- Deployed cloud infrastructure with CloudFormation and automated job scheduling.
- Supported data warehouses and ODS systems powering ML workloads.

EQUIFAX, St. Louis, Missouri

Feb 2020 – Apr 2020

Sr Data Engineer, Contractor

- Developed File Hashing to compare data and identify changes and updates to Save Computational Used by GCP Data Flow Jobs.

BAYER CROP SCIENCE, St. Louis, Missouri

June 2018 – Feb 2020

Data/Analytics Engineer, Contractor

- Developed an automated tool application that increased the percentage of soy harvested by 18% in 2018 and 22% in 2019 compared to 2017 by predicting optimal harvest times based on real-time weather and soil data
- Built APIs using Python3 Flask, FastAPI, and an ASGI Server that substantially reduced API response time by 70% compared to traditional services and followed strict privacy standards
- Helped data scientists to automate their models for efficiency and improved run time by providing more computational power to prediction models.

ERICSSON INC, Piscataway, New Jersey

Jan. 2016 – Jun. 2018

API/Data Engineer, Contractor

- Designed and Deployed an automated log monitoring tool used by T-Mobile in over 10 countries to measure network usage and predict the following month's usage, information used to tailor offers and credits to customer behaviour.
- Involved in POC to setup AKS (Azure Kubernetes Service) for Data Scientists.

EDUCATION

Master of Science, Information Systems Security

University of the Cumberlands, Kentucky, 2015- 2016; GPA - 4.0

Master of Technology, Computer Science

Jawaharlal Nehru Technological University-Hyderabad India, 2012- 2014; GPA – 3.7