

SASHANK PRAYAGA

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PROFESSIONAL SUMMARY

Results-driven Data Engineer with over 4 years of experience in building scalable data pipelines, cloud infrastructure, and machine learning solutions. Skilled in designing and automating end-to-end ETL workflows using Apache Airflow and AWS (Redshift, Lambda, RDS). Proven ability to collaborate cross-functionally with data scientists and process engineers to deliver impactful tools—such as anomaly detection models, recommendation systems, and interactive dashboards using Power BI and QuickSight. Adept at deploying ML models with FastAPI, Streamlit, and MLflow.

EXPERIENCE

Data Engineer Jun 2022 - Present
Yara International *Berlin, Germany*

- Designed and implemented an AWS data pipeline using Glue ETL, PySpark, and Redshift Spectrum, reducing data processing time by 30% for Data Lake and Data Modeling workflows.
- Built a serverless ML inference platform by containerizing AWS Lambda behind API Gateway; utilized Jinja2-parameterized CloudFormation to deliver consistent, repeatable deployments across dev/test/prod.
- Orchestrated event-driven data pipelines using Lambda and SageMaker Pipelines for automated ingestion and retraining; implemented YAML/CSV-driven multi-plant onboarding to reduce latency.
- Implemented CI/CD quality gates with Dockerized pytest suites and Trivy-based container security scanning to enforce compliance and reliability before production release.
- Managed and optimized cloud-based ML infrastructure with AWS CloudFormation and Amazon ECS, reducing cloud costs by 20% while ensuring high system uptime.
- Developed modular Python ETL for industrial telemetry and SEC calculations, standardizing hyperparameters for batch inference to improve data throughput and consistency.
- Built interactive dashboards using Amazon QuickSight and Power BI, enabling stakeholders to derive actionable insights from cleansed, unified datasets.
- Designed and implemented reusable AWS infrastructure templates (using CloudFormation) to support data science workflows, enabling faster and standardized project deployment.

Intern - Data Scientist Jul 2020 - Jan 2021
Bosch Rexroth *Homburg (Saar), Germany*

- Developed and deployed ML models using sensor data to detect heat and mass flow anomalies with 95% accuracy, contributing to predictive maintenance efforts.
- Performed exploratory data analysis (EDA) with Plotly and Seaborn, uncovering key operational parameters impacting system efficiency.
- Improved model performance by 20% through hyperparameter tuning with Optuna.

Data Analyst - Last Mile Delivery Sep 2016 - Jun 2017
Amazon Development Centre *Hyderabad, India*

- Optimized last-mile logistics for Amazon North America, improving delivery efficiency by 15%.
- Played a key role in testing a new delivery solution that achieved a 98% success rate.

EDUCATION

M.Sc. in Commercial Vehicle Technology, TU Kaiserslautern
Kaiserslautern, Germany

Apr 2022

B.Tech in Mechanical Engineering, ICFAI Foundation for Higher Education
Hyderabad, India

Jul 2016

PROJECTS

Master Thesis – Defect Detection in Automated Rail-Guided Vehicles

- Preprocessed sensor data from unmanned vehicles to detect 8 mechanical defects; achieved 90% accuracy.
- Deployed the final model using FastAPI and Streamlit; implemented MLflow to track experiments and monitor performance in real-time.

Intelligent Drive Mode Selection Using ML in Mild Hybrid Powertrains

- Developed an ML model for optimizing hybrid vehicle controllers based on telemetry (speed, RPM, load) to maximize fuel efficiency using historical driving data.

SKILLS

Programming	Python, SQL, R, C++
Data Engineering	Apache Airflow, Spark, Kafka, SageMaker Pipelines, ETL/ELT
Cloud	AWS (Redshift, Lambda, API Gateway, S3, EC2, CloudFormation)
ML & Deployment	FastAPI, Streamlit, MLflow, CI/CD, Trivy Security, OpenAPI
Databases	Redshift, Snowflake, DynamoDB, Postgres, Amazon RDS
Visualization	Power BI, Amazon QuickSight, Plotly, Seaborn
Infrastructure	IaC (CloudFormation, Jinja2), Docker, AWS CodeBuild
Tools	Jira, Confluence, Microsoft Office Suite
Soft Skills	Cross-functional Collaboration, Problem Solving, Communication

PROFESSIONAL DEVELOPMENT

AWS Certified AI Practitioner, Amazon Web Services (AWS)

Apache Airflow 3 Fundamentals, Astronomer

dbt Fundamentals, dbt learn

Google Data Analytics - Professional Certificate, Google (Coursera)

Microsoft Azure Data Fundamentals, Microsoft (Coursera)