SAI SARAN K S M S

 github.com/imhero2k   linkedin.com/in/ksms–saran   saranksms123@gmail.com   +61 0481106013

PROFILE SUMMARY

Data Engineer / Software Engineer with 2.6 years of professional experience (5+ years coding). I build reliable data pipelines and cloud-native systems across AWS and open-source stacks. Hands-on with streaming (Kafka, Spark Structured Streaming), orchestration (Airflow, dbt), data warehousing (Snowflake/BigQuery/PostgreSQL), and scalable services on Kubernetes and serverless. Strong focus on ELT/ETL design, data modelling, and production observability.

SKILLS

Data & Big Data: Apache Spark (SQL/Structured Streaming), Apache Kafka, Delta/Parquet, dbt, Airflow

Cloud & DevOps: AWS (S3, Lambda, API Gateway, DynamoDB, Cognito, SNS, CloudWatch, IAM), Docker, Kubernetes, GitLab CI/CD

Warehousing & Storage: Snowflake, Google BigQuery, PostgreSQL/PostGIS, MySQL, SQL Server, MongoDB, DynamoDB

Backend & APIs: Python (FastAPI), Java (Spring Boot), REST, Microservices, GraphQL

Programming: Python, Java, Kotlin, C++, JavaScript/TypeScript, SQL, R

Testing & Quality: JUnit, Espresso/Mockito, SonarQube, PIT (Mutation Testing)

Tools: Git/GitHub, Postman, Gradle, Terraform (basics), AWS SDK (Boto3), Amplify

PROJECTS

BirdTag (Cloud) — Serverless Media System for Tagging & Search
AWS: S3, Lambda, API Gateway, DynamoDB, Cognito, SNS; Python; REST | GitHub | Website
- Designed event-driven ingestion with S3 triggers; Lambda functions generate thumbnails, extract metadata, and persist tags in DynamoDB (schema keyed by `media_id`/`tag_type`).
- Built REST APIs (API Gateway + Lambda) for search/browse; integrated Cognito for auth and SNS for upload notifications.
- Optimized cold-starts and memory/timeout settings; added CloudWatch metrics and alerts to improve reliability.

Big Data Pipelines — Streaming & Batch Analytics
Spark Structured Streaming, Kafka, Python, Parquet/Delta, Airflow/dbt (concepts) | GitHub
- Implemented Kafka producers (multi-topic weather/energy) and a Spark consumer performing 6h/daily aggregations (windowing, watermarks) to Parquet/Delta sinks.
- Engineered schemas and partitioning strategies for efficient reads; added job checkpoints and idempotent writes.
- Outlined Airflow DAGs + dbt models for ELT in warehouse; added monitoring hooks and backfill strategies.

PTV Bus Accessibility Analysis — Spatial Data Engineering
PostgreSQL/PostGIS, GTFS, QGIS, Python/SQL | GitHub
- Ingested GTFS and ABS boundaries; created spatial indexes and LGA/SA1-level layers.
- Computed 400m catchments for commercial/education/hospital services; ran spatial joins (e.g., `ST_Buffer`, `ST_Intersects`, `ST_Union`) for coverage metrics.
- Produced LGA rankings and choropleths for bus accessibility; documented pipeline and SQL for reproducibility.

MultiAgent Route & Weather System — Tool-Calling Orchestration
Python, FastAPI (tools), Autogen-style agents, Google Maps APIs, PostGIS | GitHub
- Built agents that call routing + accident-count tools (PostGIS) and sample weather along polylines; returns polylines, legs, and filtered risk metrics.
- Added tool registration & execution separation, robust error handling, and clean interfaces for future tools (e.g., road snapping, places).

EXPERIENCE

Infor   (Hyderabad, India)   04/2022 – 07/2024
Associate Software Engineer — EPM Team
- Automated deployments for reporting apps on Infor CloudSuite using **GitLab CI/CD**, **Docker**, and YAML pipelines across Linux environments.
- Developed Python utilities to generate/archive report snapshots in **AWS S3**, improving auditability and recovery.
- Managed infra with **EC2 ASG**, Launch Templates, ECR, Secrets Manager; implemented observability via **CloudWatch** and **SNS**.
- Integrated with Infor Document Management (IDM); enforced least-privilege IAM and role-based access.
- Participated in Agile sprints; coordinated releases with platform/ops to reduce lead time and deployment risk.

EDUCATION

Monash University, Melbourne   06/2024 – Present
Master of Information Technology

Jawaharlal Nehru Technological University   08/2018 – 06/2022
B.Tech. in Computer Science and Engineering