

# SHAHEER JAMAL

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## OBJECTIVE

Motivated Computer Science student specializing in Cloud Data Engineering with hands-on experience building scalable ETL pipelines and real-time data processing systems. Proficient in orchestrating workflows using Apache Airflow and architecting event-driven solutions on AWS (Glue, Lambda, Athena). Skilled in Python, SQL, and Snowflake for data warehousing and automation. Eager to leverage a strong technical foundation in cloud infrastructure and big data technologies to solve complex data challenges in a professional setting

## PROJECTS

### Pandemic Insights: ETL Pipeline with AWS Glue & Athena | [Github](#)

- Architected a scalable ETL pipeline to ingest and transform complex COVID-19 datasets from disparate sources into a centralized Data Warehouse.
- Engineered optimized Data Models (Star Schema) in Amazon Redshift, designing fact and dimension tables to reduce query latency by 40%.
- Orchestrated serverless data transformations using AWS Glue jobs and enabled ad-hoc SQL analysis via Amazon Athena for immediate insights generation

### Automated Weather Data Pipeline with Apache Airflow | [Github](#)

- Orchestrated an end-to-end ETL workflow using Apache Airflow to automate the extraction of real-time weather data from the OpenWeather API.
- Designed Python-based DAGs (Directed Acyclic Graphs) to manage task dependencies, ensuring fault-tolerant scheduling and efficient data flow control.
- Implemented automated data ingestion into AWS S3, transforming raw JSON API responses into structured formats for historical analysis and reporting

### Event-Driven Data Processing System (AWS) | [Github](#)

- Designed a decoupled, event-driven architecture leveraging AWS SNS, SQS, and Lambda to handle high-throughput asynchronous data streams.
- Implemented robust message queuing patterns to ensure data durability and fault tolerance during traffic spikes.
- Optimized Lambda execution logic to minimize cold starts and achieve real-time processing triggers for dynamic event payloads

### Real-Time Stock Market Data Pipeline | [Github](#)

- Built a high-velocity streaming pipeline using Apache Airflow and AWS to capture and process real-time stock market fluctuations.
- Integrated AWS Glue Crawlers and Athena to automate schema discovery and enable near real-time SQL querying of streaming data stored in S3.
- Developed a fault-tolerant ingestion layer ensuring sub-second data availability for downstream analytics dashboards.

### Real-Time Data Pipeline with SCD (Snowflake & NiFi) | [Github](#)

- Developed a resilient data ingestion workflow using Apache NiFi and Python to stream synthetic data into Amazon S3.
- Implemented Slowly Changing Dimensions (SCD Type 1 & 2) logic to accurately track historical data changes and maintain dimension history.
- Automated data loading into Snowflake using Snowpipe, ensuring continuous, low-latency updates for the data warehousing layer.

## SKILLS

### Cloud Platforms (AWS)

- Compute & Integration: AWS Lambda (Serverless), SNS, SQS, EC2.
- Storage & Databases: Amazon S3, Amazon Redshift, DynamoDB.
- Analytics & ETL: AWS Glue (Crawlers, Jobs), Amazon Athena.
- Security & Management: IAM Roles, CloudWatch.

### Data Engineering & Warehousing

- Orchestration & Workflow: Apache Airflow, DAG Design, Task Scheduling.
- Big Data & Streaming: Apache Kafka, Apache NiFi, Real-Time Data Pipelines.
- Warehousing: Snowflake (Snowpipe, Tasks), Redshift, Star Schema Design.
- Concepts: ETL/ELT, Slowly Changing Dimensions (SCD all types), Event-Driven Architecture, Data Modeling (Fact/Dimension), Data Ingestion.

## EDUCATION

### GRADUATION

BSCS | Sir Syed University of Engineering & Technology, 2028

### HIGH SCHOOL

Computer Science | Delhi Science College, 2024

### SECONDARY SCHOOL

Computer Science | TFS Schooling System, 2022

## CERTIFICATIONS

### Cloud Data Engineering | Nov 2025 (SMIT)

Comprehensive training covering AWS, Python, ETL pipelines, and Data Warehousing.

### Snowflake Hands-On Essentials | Snowflake Inc.

Demonstrated practical proficiency in building pipelines, schemas in snowflake

### Associate Data Engineer | (in progress)

Currently mastering advanced ETL patterns and data lakehouse architecture.