Sai Bhargavi Pusuluri

Data Engineer | Cloud Data Engineer | AWS, Azure, GCP

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PROFESSIONAL SUMMARY

Data Engineer with 3+ years of designing and optimizing cloud-native ETL/ELT pipelines that scale to millions of records daily. Proven record in reducing cloud costs by 35% and improving system throughput by 40%, driving faster insights in financial services and healthcare. Expert in automating workflows, tuning databases, and building data marts across AWS, Azure, and GCP.

TECHNICAL SKILLS

Cloud Platforms: AWS (Glue, Lambda, Redshift, S3, DynamoDB), Azure (ADF, Synapse, Data Lake, AKS), GCP (BigQuery)
Programming: Python (OOP, Data Structures), SQL, PySpark, Bash
Data Engineering: Apache Airflow, Azure Data Factory, dbt, Snowflake, Databricks, Apache Spark
Big Data & Streaming: Kafka, Flink, Hadoop, Hive
DevOps & CI/CD: Docker, Kubernetes, Jenkins, Terraform, Git, GitHub Actions
Analytics & BI: Power BI, Tableau, Salesforce Analytics
Data Governance: Microsoft Purview, Azure DevOps, Data Quality Frameworks

PROFESSIONAL EXPERIENCE

Citizens Bank **Feb 2025 – Present**
AWS Data Engineer *Remote*

- **Performance Optimization:** Enhanced AWS Glue & Lambda ETL pipelines to process 10 million records daily from S3 to Redshift, achieving 35% throughput improvement and reducing customer insight delivery time from hours to minutes
- **Cost Engineering:** Implemented Python-based data structure optimizations and automated query tuning, cutting processing costs by 35% across 15+ production workflows
- **Analytics Acceleration:** Built optimized Snowflake data marts with advanced SQL techniques, reducing executive dashboard latency by 40% and enabling real-time business decision making
- **Database Optimization:** Leveraged DynamoDB for high-frequency transaction queries (1M+ daily), improving customer-facing application response times by 25%
- **Process Automation:** Streamlined financial trend analysis workflows, reducing manual effort by 25% and improving forecast accuracy for the finance analytics team
- **DevOps Excellence:** Automated GitHub workflows and Agile processes, accelerating release cycles by 20%
- **Technologies:** AWS Glue, Lambda, Redshift, S3, DynamoDB, Snowflake, Python, PySpark, SQL, GitHub Actions

Kent State University **Sep 2023 – Dec 2024**
Data Engineer *Kent, OH*

- **Dashboard Development:** Built interactive Power BI dashboards integrated with PostgreSQL databases, reducing report creation time by 30% and enabling data-driven academic planning
- **Database Performance:** Optimized PostgreSQL through strategic indexing and schema redesign, improving query performance by 25% for datasets exceeding 5M student records
- **ETL Automation:** Developed Python-based ETL workflows with error handling and monitoring, reducing manual processing time by 40% and eliminating weekend maintenance windows
- **Process Improvement:** Created Excel and Google Sheets automation models, streamlining administrative reporting and reducing workload by 20%
- **Technologies:** Power BI, PostgreSQL, Python, SQL, SSIS, Excel, Google Sheets

CARE Health Insurance **May 2022 – Jun 2023**
Azure Data Engineer *Mumbai, India*

- **Pipeline Architecture:** Designed Azure Data Factory + Synapse Analytics pipelines processing 2TB+ monthly healthcare data, reducing processing time by 35% and improving patient outcome analytics
- **Quality Engineering:** Implemented dbt-based data transformations with comprehensive testing, reducing pipeline errors by 25%

and improving data reliability for compliance reporting

- **Performance Optimization:** Optimized Azure Data Lake storage patterns and Synapse queries, accelerating analytics workloads by 25% for claims processing and regulatory compliance
- **DevOps Integration:** Streamlined CI/CD deployments through Azure DevOps, improving delivery speed by 30% while implementing governance controls with Microsoft Purview
- **Data Governance:** Established data lineage tracking and quality monitoring frameworks ensuring HIPAA compliance across all patient data workflows
- **Technologies:** Azure Data Factory, Synapse Analytics, Azure Data Lake, Databricks, dbt, Microsoft Purview, Python, SQL

CARE Health Insurance **Feb 2021 – Apr 2022**
Data Engineering Intern *Mumbai, India*

- **Automation Development:** Built automated SQL reporting and Power BI dashboards, improving accuracy by 30% and eliminating manual reporting errors for patient outcome tracking
- **Analytics Acceleration:** Delivered healthcare insights 25% faster using SAS for complex patient datasets containing 2M+ records
- **Pipeline Optimization:** Enhanced claims processing throughput by 40% using PySpark, Hadoop, and Hive for large-scale data transformations
- **Technologies:** Power BI, SQL, SAS, PySpark, Hadoop, Hive

EDUCATION

Kent State University, USA **Aug 2023 – Dec 2024**
Master of Science (M.S.), Computer Science, GPA: 3.9/4

Prasad V Potluri Siddhartha Institute of Technology, India **Jun 2019 – May 2023**
Bachelor of Technology (B.Tech) in Computer Science, GPA: 3.45/4

PROJECTS

Cloud Cost Optimization & Performance Tuning – Citizens Bank

- Reduced AWS cloud costs by 20% through automated archiving, EC2 right-sizing, and query optimization in Redshift.
- Increased ETL pipeline throughput by 35% with Glue enhancements.

Automated Scalable ETL Pipelines & Data Quality Automation – Kent State University

- Built Python and Snowflake ingestion and validation pipelines, cutting manual cleansing time by 30%.
- Implemented anomaly detection models, improving reporting accuracy.

Cloud-Native Pipeline Modernization & Cost Reduction – CARE Health Insurance

- Migrated workloads to AKS microservices, boosting deployment speed by 50% and lowering costs by 25%.
- Automated workflows with Azure Functions to ensure HIPAA compliance.

CERTIFICATIONS

• Microsoft Certified- Azure Data Engineer – Associate, Sep 2024
• AWS Certified Solutions Architect – Associate, Oct 2024

PUBLICATIONS

S. B. Pusuluri, V. R. Vuyyala, M. S. R. Kona,
"Crop Recommender System Based on Ensemble Classifiers," *2023 International Conference on Advancement in Computation & Computer Technologies (InCACCT)*, Gharuan, India, 2023, pp. 68-73.
DOI: 10.1109/InCACCT57535.2023.10141808