

# 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

*AWS Data Engineer*

**Feb 2025 – Present**

*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

*Data Engineer*

**Sep 2023 – Dec 2024**

*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

*Azure Data Engineer*

**May 2022 – Jun 2023**

*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

*Data Engineering Intern*

**Feb 2021 – Apr 2022**

*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

*Master of Science (M.S.), Computer Science, GPA: 3.9/4*

**Aug 2023 – Dec 2024**

### Prasad V Potluri Siddhartha Institute of Technology, India

*Bachelor of Technology (B.Tech) in Computer Science, GPA: 3.45/4*

**Jun 2019 – May 2023**

## 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](https://doi.org/10.1109/InCACCT57535.2023.10141808)