

VASANTHI ROUTHU

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Portfolio | LinkedIn | GitHub

PROFESSIONAL SUMMARY

Senior Data Engineer and Data Architect with nearly 8 years of experience architecting high-scale Data Pipelines and ETL/ELT solutions. Expert in Data Modeling, end-to-end Data Ingestion, and managing petabyte-scale Data Warehouse environments across Azure, Snowflake, and AWS. Proven track record of ensuring strict adherence to Data Governance and Compliance (HIPAA/PHI) while optimizing cloud compute costs through CloudWatch and automated monitoring.

TECHNICAL SKILLS

Data Architecture & Modeling: Medallion Lakehouse, Data Modeling (Star/Snowflake), Data Vault 2.0, Data Warehouse Design, PII De-identification, HIPAA Compliance

Data Pipelines & Ingestion: End-to-end Data Pipelines, Batch/Real-time Data Ingestion, PySpark, Apache Spark, Airflow, Kafka, Delta Tables

Cloud & Monitoring: Microsoft Azure (ADF, Databricks, Synapse), AWS (S3, Redshift, Glue), Amazon CloudWatch, Azure Monitor, Snowflake

Programming & Databases: Python, SQL (T-SQL, PostgreSQL, PL/pgSQL), DAX, Azure SQL, SQL Server, Cosmos DB

DataOps & Methodologies: CI/CD (GitHub Actions, Azure DevOps), GitFlow, Query Tuning, Cloud Cost Optimization, Agile/Scrum

PROFESSIONAL EXPERIENCE

Senior Data Engineer GoodRx, USA February 2024 – Present

- Architected config-driven Data Pipelines using a 3-layer Medallion architecture in Databricks to handle complex Data Ingestion from JSON sources.
- Engineered a HIPAA-compliant de-identification engine for 100M+ records; utilized CloudWatch for real-time monitoring and automated Slack/PagerDuty alerting.
- Optimized Data Warehouse delivery by orchestrating Airflow and AWS Glue to synchronize transaction data into Amazon Redshift, ensuring high data freshness.
- Performed advanced Data Modeling to design enterprise-grade data marts, reducing PostgreSQL runtime from 14 hours to less than an hour via optimized commit logic.

Senior Data Engineer Digital Realty, Remote, USA July 2023 – February 2024

- Designed and implemented Azure Data Factory (ADF) workflows, improving organizational efficiency by 30% through optimized Data Ingestion processes.
- Collaborated with stakeholders to define Data Modeling requirements and ensure successful Data Warehouse implementations across Azure Synapse and Analysis Services.
- Conducted data quality assessments and resolved issues, ensuring compliance with GDPR through best data handling practices and query performance tuning.
- Applied advanced SQL techniques for indexing and performance tuning to support robust reporting solutions in Power BI and Tableau.

Senior Data Engineer Cision, Hyderabad, India August 2021 – August 2022

- Led the migration of legacy data architectures to a centralized Snowflake Data Warehouse using ADF and Spark; implemented RBAC and dynamic data masking.
- Engineered dynamic schema handling for Data Pipelines within Azure to automate structural updates, significantly reducing manual maintenance.

- Optimized large-scale SQL transformations, improving data availability by 40% for ad-hoc research; designed Power BI dashboards for Data Ingestion health visibility.

Data Engineer

Itron, Hyderabad, India December 2017 – July 2021

- Architected and Migrated an end-to-end BI ecosystem to Azure, transitioning legacy SSIS packages to modern Data Pipelines in ADF.
- Modernized taxation processes by developing a robust automated ETL framework and a custom Python/Selenium RPA solution for report distribution.
- Developed high-performance Data Modeling solutions using SSAS Tabular models and complex DAX layers to support global financial audits.

EDUCATION

Master of Science in Computer Science — University of North Texas, USA

Bachelor of Technology in Electronics and Communication Engineering — JNTU, India

CERTIFICATIONS

Microsoft Certified: Azure Data Engineer Associate (DP-200/DP-201)

Microsoft 70-761: Querying Data with Transact-SQL

Microsoft 70-778: Analyzing and Visualizing Data with Power BI

ADDITIONAL INFORMATION

No sponsorship required

Based in Austin, TX; Open to 100% Remote or Relocation within the USA