

SIVARAM SENTHILKUMAR

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Summary

Senior data analytics engineer with 5+ years building ETL/ELT pipelines, data models, and warehouse tables on AWS in banking and telecom. Deep hands-on experience with AWS (S3, Glue, EMR, EC2, Redshift, Athena), SQL, Python/PySpark, dbt, and Airflow, with Tableau as the primary reporting layer for business and executive stakeholders. Strong on data quality, internal-control reporting, and governance in regulated financial services.

Experience

University of Massachusetts Amherst

Jan 2026 – May 2026

Graduate Teaching Assistant – Predictive Analytics & Statistical Learning

Amherst, MA

- Coached 60+ graduate students on statistical analysis, predictive modeling, and experiment design, communicating technical concepts clearly to technical and non-technical audiences

HDFC Bank – Data Strategy Department

Jun 2023 – Jun 2024

Senior Data Analyst

Bangalore, India

- Designed and re-designed ETL processes, data models, and warehouse tables using SQL, PySpark, dbt, Airflow, and AWS Glue, landing data in Amazon S3 and Redshift to feed a centralized feature store, improving decision velocity 15%
- Built self-service Tableau reporting on Amazon Redshift with published data sources, extracts, calculated fields, and parameterized dashboards for product, finance, and executive stakeholders, lifting analytics adoption 35%
- Owned analytics for PayZapp payment-app growth funnels on an S3 data lake, analyzing acquisition, conversion, and retention data in SQL and Python (Pandas) via Athena and Redshift, supporting \$33M in revenue and 20% acquisition
- Enforced data standards, cleansing, normalization, and internal-control reporting across Glue/Airflow pipelines; remediated data anomalies to keep regulated banking data in S3 and Redshift audit-ready and access-controlled via IAM
- Deployed production forecasting pipelines (Prophet, ARIMA, LSTM) in PySpark on AWS EMR/EC2 with CloudWatch monitoring, cutting forecast error 18%; designed A/B tests and power/sample-size analyses that cut churn 10%

Vodafone – Technology Department

Jul 2019 – Jun 2023

Data Analyst

Ahmedabad, India

- Built SQL, PySpark, and Python (Pandas) ETL integrating CRM, billing, and network-usage data for 10M+ subscribers into unified data models on AWS S3/Redshift; optimized complex SQL queries, cutting reporting latency 30%
- Partnered with network, product, and CRM stakeholders to define and document data requirements, translating business specifications into queries, data models, and Tableau dashboards across fraud and customer-lifecycle reporting
- Built churn models in Python (XGBoost, Cox survival) and ran A/B experiments on promotional offers, publishing results in Tableau; lifted campaign efficiency 12% and retention 8% in high-risk segments

Siemens – Technology Innovation & Analytics Department

May 2017 – Jun 2017

Data Insights Analyst Intern

Chennai, India

- Built SQL and Python (Pandas) ETL workflows standardizing 100K+ ERP and transactional records into consistent datasets and Tableau reports, automating reporting and cutting manual effort 20%

Projects

Food Insecurity Prediction | *Data Modeling, Neural Networks, SHAP, Python*

UMass • 2025

- Modeled 38 socio-economic features across 3,000+ U.S. counties in an interpretable neural network; applied SHAP to surface policy-relevant drivers for stakeholder decisions

Brain Tumor Detection | *MobileNetV2, Transfer Learning, Grad-CAM, PyTorch*

UMass • 2025

- Benchmarked 6 pretrained CNNs on 253 MRI scans via transfer learning; achieved 94.5% validation AUC and 95% tumor recall with Grad-CAM explainability

Technical Skills

AWS: S3, Glue (ETL jobs & crawlers), EMR, EC2, Amazon Redshift, Athena, Lambda, IAM, CloudWatch

Tableau & BI: Tableau (dashboards, published data sources, extracts, calculated fields, LOD expressions, Tableau Server), Power BI, Looker Studio, Excel, self-service & ad hoc reporting, data storytelling

Data Engineering: ETL/ELT design, data modeling, warehouse tables, dbt, Apache Airflow, PySpark, Spark, Kubernetes, Jenkins, Git, CI/CD; BigQuery, Azure Databricks

Languages & Databases: Python (Pandas, NumPy), SQL, R; PostgreSQL, MySQL, Snowflake, Oracle SQL, SQL Server

Quality & Analytics: data cleansing & normalization, validation, anomaly remediation, internal-control reporting, governance, compliance & audit; A/B testing, experiment design, power & sample-size analysis, forecasting, ML

Education

University of Massachusetts Amherst MS Graduate Certificate in **AI Engineering**, MA 3.8 GPA **Sep 2024 – May 2026**

Jio Institute | Nanyang Technology Univ PGP in **AI & Data Science**, Mumbai, India | Singapore **Jul 2022 – May 2023**

Vellore Institute of Technology, Bachelor of Technology, Chennai, India

Jun 2015 – May 2019