

# Satya Mohan Samanthakurthi

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## SUMMARY

Azure Data Engineer with around **5 years of experience** across SQL Server, SSIS, SSRS, Power BI, Azure Databricks, PySpark, Spark SQL, Azure SQL, and **Microsoft Fabric**. Experienced in **Fabric-first lakehouse development**, scalable ETL/ELT pipelines, SQL-to-notebook migration, data warehousing, data modelling, governance-aware delivery, and multi-environment release validation. Worked at **Cognizant** across healthcare and finance data platforms, supporting client-facing requirements gathering, source-to-target mapping, reconciliation, data quality checks, CI/CD release controls, UAT evidence, and analytics-ready data products.

## PROFESSIONAL EXPERIENCE

**Cognizant**, Associate Engineer, India

Jul 2024 – Dec 2024

*Client: Optum Finance / UnitedHealth Group*

- Delivered a **Microsoft Fabric and Azure modernisation** initiative by migrating legacy SQL reporting logic into Microsoft Fabric notebook patterns and Azure Databricks notebooks, preserving joins, filters, business rules, and report outputs.
- Engineered scalable ETL/ELT pipelines using Microsoft Fabric Lakehouse patterns, Azure Databricks, and PySpark to ingest, transform, and validate finance datasets.
- Migrated **50+ SQL scripts** into parameterised notebook-based workflows, aligning SQL transformations with lakehouse-ready processing, reusable notebook patterns, audit columns, and curated reporting layers.
- Designed reusable PySpark transformations across **20+ datasets**, covering schema alignment, deduplication, null handling, data quality rules, security-aware handling, and row-count validation.
- Improved pipeline execution by **25%** through Spark SQL refactoring, partition-aware logic, removal of repeated transformations, and notebook parameterisation.
- Delivered curated finance datasets and Power BI reporting layers for **10+ KPIs**, reducing recurring manual Excel preparation by approximately **30%**.
- Coordinated with analysts, testers, SMEs, client stakeholders, and DB teams on requirements clarification, mapping decisions, UAT evidence, release checklists, and **DEV/INT/UAT/PROD** deployment validation.

**Cognizant**, Associate Engineer, India

Oct 2023 – Jun 2024

*Client: CareSource – BI Reporting 2.0*

- Delivered a **2-month cloud migration and modernisation POC** from on-premises SSIS/SSRS to **Azure Databricks and Power BI**, improving report performance by **30%** and supporting client sign-off.
- Re-engineered legacy SSIS control-flow and data-flow logic into modular **Databricks SQL and PySpark ETL/ELT pipelines** with reusable transformations, workflow scheduling, and lakehouse-oriented processing patterns.
- Reconciled **10M+ records** between SQL Server, SSIS outputs, and Databricks datasets using row counts, aggregate checks, exception reports, source-to-target mapping, and validation thresholds.
- Rebuilt **15+ SSIS/SSRS workflows** as cloud-ready Databricks pipelines while maintaining HIPAA-aware data handling, report validation discipline, and governance-focused documentation.
- Documented transformation rules, data model changes, mapping decisions, UAT defects, validation results, and sign-off packs for analysts, testers, SMEs, team leads, and client stakeholders.
- Supported version-controlled delivery through Git/TFS, release notes, deployment evidence, defect tracking, and multi-environment validation across project phases.

**Cognizant**, Programmer Analyst, India

Nov 2021 – Sep 2023

*Client: CareSource – Reporting*

- Developed **20+ T-SQL objects**, including stored procedures, views, functions, indexed views, triggers, and constraints for healthcare finance, claims, provider, and member reporting.
- Built and supported **120+ SSIS workloads** integrating SQL Server, flat files, Excel, ODBC, and OLE DB sources into reporting-ready datasets for downstream analytics and SSRS reporting.
- Automated ETL workflows using Execute SQL Task, Foreach Loop, Lookup, Merge Join, Conditional Split, Derived Column, Aggregate, Union All, and Bulk Insert components.
- Optimized average query performance by **20%** through execution-plan review, index tuning, join rework, stored procedure refactoring, and filter optimization.
- Designed **8 SSRS paginated reports** with drill-down views, matrix layouts, grouped tablix sections, parameter filters, expressions, and state-specific logic.
- Supported **200+ report and ETL releases** across **DEV, INT, CRT, UAT, EUAT, PRE-PROD, and PROD** with **zero P1 incidents** across a 2-year reporting support period.

**Sharp Digital**, Software Engineer – Business Intelligence, India

Jan 2020 – Oct 2021

*Client Projects*

- Built **8 Power BI and SSRS reporting outputs** using slicers, cards, matrix visuals, KPIs, drill-down views, drill-through navigation, parameters, and expressions.

- Developed **25+ SQL scripts and database objects** using joins, subqueries, views, stored procedures, functions, indexes, ranking functions, and set operations.
- Created and maintained **12+ SSIS packages** with Lookup, Merge Join, Conditional Split, Derived Column, Aggregate, Sort, Union All, OLE DB, and Execute SQL Task components.
- Implemented Power BI report features including calculated columns, DAX measures, relationships, bookmarks, selection panes, row-level security, and scheduled refresh through on-premises gateway.

## EDUCATION

**MSc, Artificial Intelligence for Business** — National College of Ireland, Dublin

*Jan 2025 – Jan 2026*

- Developed a Hybrid Ant Colony Optimisation routing model using the LaDe dataset with **1.4M+ delivery trajectories**; KNN-ACO achieved a **2.46 km** best route, **73.85%** improvement over random initialisation, and **68.46% Hit Rate @ Top 3** across 30 test routes.
- Designed a UiPath RPA proof-of-concept for student Leap Card triage using OCR extraction, rule checks, CSV audit reports, and email notifications; targeted **≥50%** auto-approval and **60–70%** lower handling time.
- Built a CORDIS student research discovery project using **Microsoft Fabric, Lakehouse, Python ETL, SQL, and CORDIS open data**; structured **82K+ research records** into analytical datasets for project search, organisation lookup, topic filtering, and funding analysis. [Live Web App](#)
- Designed an end-to-end ETL flow from CORDIS API/ZIP extracts into **Landing, Bronze, Silver, and Gold layers**, applying schema cleaning, deduplication, audit checks, data quality rules, and curated outputs for reporting and research analytics. [ETL Flow](#)

**B.Tech, Electronics & Communication Engineering** — SRIN College, India

*Jun 2016 – Nov 2020*

## SKILLS

|                              |                                                                                                                                                                                               |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Data Engineering:</b>     | Azure Databricks, PySpark, Spark SQL, Azure Data Factory, Databricks Workflows, Azure SQL, Delta Lake, Microsoft Fabric, Fabric Lakehouse, Fabric Notebooks, OneLake, Medallion Architecture. |
| <b>SQL &amp; BI:</b>         | SQL Server, T-SQL, SSIS, SSRS, Power BI, DAX, Power Query, Stored Procedures, Views, Query Tuning, Paginated Reports, Semantic Models.                                                        |
| <b>Data Quality:</b>         | Source-to-Target Mapping, Reconciliation, Row Counts, Schema Validation, Audit Columns, Data Quality Rules, Incremental Loads, Performance Tuning, Release Validation.                        |
| <b>AI &amp; Programming:</b> | Python, Pandas, NumPy, Scikit-learn, TensorFlow, KQL, Machine Learning, Feature Engineering, Model Evaluation, Optimisation Algorithms, UiPath.                                               |
| <b>Tools:</b>                | Git/TFS, Azure DevOps, CI/CD Release Controls, Jira, Confluence, Multi-Environment Deployments, UAT Evidence, Release Validation, VS Code.                                                    |

## CERTIFICATIONS

- Microsoft Certified: Fabric Data Engineer Associate (DP-700) | Microsoft | Mar 2026
- Microsoft Certified: Power BI Data Analyst (PL-300) | Microsoft | Dec 2024
- Microsoft Certified: Azure Fundamentals (AZ-900) and Azure AI Fundamentals (AI-900) | Microsoft | Dec 2024
- Supervised Machine Learning; Advanced Learning Algorithms; Unsupervised Learning, Recommenders, Reinforcement Learning | DeepLearning.AI | 2025–2026
- Oracle Cloud Infrastructure AI Foundations Associate | Oracle | Sep 2025

## AWARDS & RECOGNITION

- Best Employee of the Project – CareSource MDP migration | Cognizant | 2024
- Emerging Talent Award | Cognizant | 2023
- “Working as One” Award | Cognizant | 2022