

# Madhava Lakshmi Satya Mohan Samanthakurthi

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## PROFESSIONAL SUMMARY

Certified **Azure Data Engineer** with 3+ years of enterprise experience at Cognizant, delivering data engineering and BI solutions across finance and healthcare domains. Strong expertise in on-prem SQL Server, SSIS, SSRS, and large-scale migrations to Azure cloud services, Databricks, PySpark, Azure Data Factory, Microsoft Fabric, Lakehouse architecture, scalable data pipelines, and analytics-ready data models and Power BI, including migration of 50+ SQL and SSIS workloads and 30+ SSRS Reports. Proven technical POC and lead developer, driving modern data platform validation, automation, and reporting optimization. Recently completed an MSc in Artificial Intelligence for Business, delivering real-time and AI-driven healthcare systems solutions (**Stamp 1G Visa**).

## PROFESSIONAL EXPERIENCE

### Cognizant, Associate Engineer, Hyderabad, India

Jul 2024 - Dec 2024

Client: Optum Finance (United Health Group)

- Engineered Azure Databricks workflows and Power BI dashboards using PySpark, Azure SQL, and DAX, enabling finance stakeholders to monitor KPIs in real time and reduce manual Excel-based reporting by **nearly 30%**.
- Designed and optimized large-scale PySpark transformation pipelines (joins, aggregations, standardization) across **Medallion architecture** layers, improving data processing efficiency and ensuring analytics-ready datasets.
- Migrated **50+ SQL scripts** to Azure Databricks Notebooks, automating batch data loads via workflows and configuration tables, improving execution **performance by 25%** and reducing operational dependency.
- Automated 20+ Jaspersoft and SSRS** reports with scheduled executions, **ensuring 100% on time** financial reporting and improving reporting reliability under strict client SLAs.
- Delivered sprint commitments in Agile and Kanban environments, consistently meeting deadlines for one of the largest U.S. managed care finance programs.

### Cognizant, Associate Engineer, Hyderabad, India

Oct 2023 - Jun 2024

Client: CareSource - BI Reporting 2.0

- Led Proof of Concept for CareSource, migrating from on-prem SSIS/SSRS to Azure Databricks SQL, validating cloud feasibility and achieving **30% faster report generation** and achieved **99.9% availability**.
- Designed cloud-native data architecture **within 1 month** of Azure onboarding, replicating legacy SSIS packages and SSRS reports into Databricks and Power BI, improving scalability and system performance.
- Migrated legacy ETL and reporting workloads to Azure Databricks and Power BI, reducing report generation time and enhancing cross domain data accessibility.
- Re-engineered SSIS ETL workflows into Databricks SQL and PySpark based ELT pipelines, orchestrated using Databricks workflows.

### Cognizant, Programmer Analyst, Hyderabad, India

Nov 2021 - Sep 2023

Client: CareSource - Reporting

- Developed and **optimized complex T-SQL stored procedures** and SSIS ETL pipelines processing high-volume finance and claims datasets, improving query **performance by 20%** through indexing and tuning strategies.
- Designed and deployed 30+ parameterized SSRS reports (drill-down, matrix, dynamic formatting), enhancing business visibility across multi-state healthcare operations.
- Built robust ETL solutions integrating heterogeneous data sources (SQL Server, flat files, Excel, ODBC/OLE DB), ensuring data consistency and integrity across reporting systems.
- Automated bulk data operations using advanced SSIS** control flows and transformations (For Loop, For Each, Execute SQL, Bulk Insert) to automate complex finance and claims data workflows.
- Managed deployments using Git and CI/CD pipelines, ensuring stable releases and seamless operations across **Indiana, Ohio, West Virginia, and Georgia business domains**.
- Designed indexed views, triggers, user-defined functions, and constraints in SQL Server to enforce data integrity and improve transactional performance.

## EDUCATION AND ACADEMIC PROJECTS

### MSc in AI for Business, National College of Ireland, Dublin

Jan 2025 - Jan 2026

- Automated the **Leap Card student application process** using UiPath (RPA) with rule-based validation, CSV audit reports, email notifications.
- Completed MSc research on Hybrid Ant Colony Optimization for Last-Mile Delivery using ANN, KNN, and LSTM with Python and ML frameworks for last-mile delivery optimization.

### Bachelor of Technology, Electronics and Communication Engineering, SRIN College, India

June 2016 - Nov 2020

## SKILLS & TECHNOLOGIES

### Cloud Skills

Azure Data Factory, Azure Databricks, Microsoft Fabric, Lakehouse, OneLake, Azure SQL, Power BI Service and Desktop, Data modeling, Event Streams, Data Activator, KQL Database, Lakehouse Medallion architecture.

### Business Intelligence | Data Engineering

T-SQL, MS SQL Server, SSMS, SSIS, SSRS Paginated Reports, Power BI (DAX, Power Query), Tidal Automation, Jaspersoft, Rapid-Miner, ADF Pipelines, Databricks Workflows, ETL/ELT pipelines and batch processing.

### Programming | ML

SQL, PySpark, Python, KQL (Kusto Query Language), NumPy, Pandas, Matplotlib, Scikit-learn, TensorFlow, Supervised, Unsupervised, Reinforcement Learning, Recommendation Systems, Feature Engineering, Model Evaluation, Feature Scaling, NLP, ANN, DNN.

### Business Tools | DevOps

Jupyter Notebook, Google Colab, VS Code, Git, Databricks Workflows, ADF Pipelines, Tidal Automation, Jira, Confluence, Agile delivery (Scrum, Kanban), Data governance and risk compliance.

## CERTIFICATIONS

- Microsoft Certified: Azure Fundamentals (AZ-900) | Microsoft | Dec 2024
- Microsoft Certified: Azure AI Fundamentals (AI-900) | Microsoft | Dec 2024
- Microsoft Certified: Power BI Data Analyst (PL-300) | Microsoft | Dec 2024
- Microsoft Certified: Fabric Data Engineer Associate (DP-700) | Microsoft | Mar 2026
- Supervised Machine Learning: Regression and Classification | DeepLearning.AI | Dec 2025
- Advanced Learning Algorithms | DeepLearning.AI | Jan 2026
- Unsupervised Learning, Recommenders, Reinforcement Learning | DeepLearning.AI | Jan 2026
- Oracle Cloud Infrastructure AI Foundations Associate (1ZO-1122-25) | Oracle | Sep 2025
- Programming for Everybody (Getting Started with Python) | University of Michigan (Coursera) | Aug 2025.
- 20+ Professional Courses in SQL, SSIS, ADF, Databricks, Power BI, PySpark, Microsoft Fabric, Kafka | Udemy · DataCamp · Coursera · Microsoft Learn | Ongoing

## AWARDS & RECOGNITION

- Best Employee of the Project - Caresource MDP migration | Cognizant | 2024.
- Emerging Talent Award | Cognizant | 2023.
- "Working as One" Award | Cognizant | 2022.