

Lakshminarayana Natarajan

DATA & AI ENGINEER

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SUMMARY

Data and AI Engineer with 5 years of experience building SQL and Python data pipelines, curated data models, and enterprise-scale data warehouses, with AWS cloud, strong data quality and governance, and applied AI/ML. Translates complex operational challenges into scalable, analytics-ready solutions across financial, supply-chain, and enterprise data. M.S. in Information Systems, University of Maryland.

CORE SKILLS

SQL & Python: SQL (Oracle, SQL Server, PostgreSQL, MySQL; PL/SQL, T-SQL), Python (pandas, NumPy), query optimization

Data Modeling & Warehousing: Dimensional modeling, star schema, curated data models, analytics-ready datasets, enterprise-scale warehousing

ETL & Integration: ETL/ELT development, data pipeline design, multi-source data integration, Apache Airflow, IBM DataStage, dbt

AWS & Cloud: AWS (S3, Glue, Athena, Redshift), Delta Lake, Databricks, PySpark, large-scale processing

Data Quality & Governance: Data validation, reconciliation, governance, monitoring and alerting, accuracy/consistency/reliability frameworks

AI & Analytics: AI/ML and RAG solutions (OpenAI, scikit-learn), AI-assisted coding (Claude), operational analytics, automation

PROFESSIONAL EXPERIENCE

Data Engineer, Capstone Project (Deloitte-Sponsored)

Feb 2025 - Dec 2025

University of Maryland, Robert H. Smith School of Business

College Park, MD

- Built Python data pipelines and a normalized PostgreSQL model producing clean, structured data, plus a RAG/LLM assistant (OpenAI) enabling self-serve, AI-driven analytics for stakeholders.
- Used AI-assisted coding workflows (Claude) to accelerate development, with documented schemas and data-quality checks across 3 curated datasets.

Data Engineer / SQL Developer

Jan 2020 - Aug 2024

Tata Consultancy Services | Client: AIG (Life & Retirement)

Chennai, India

ALIP (Accenture Life Insurance Platform)

Jan 2022 - Aug 2024

- Built SQL and ETL pipelines and dimensional data models over **5M+ daily transactions** in Oracle and SQL Server, delivering curated, analytics-ready datasets for operational and performance reporting.
- Automated recurring reporting, cutting a **4-hour cycle to 15 minutes** for **200+** users, improving accuracy and reducing manual effort.
- Partnered with stakeholders to translate operational challenges into scalable data solutions, and documented data flows and models.

ACC, Monitoring & Reporting

Sep 2020 - Dec 2021

- Established data validation, reconciliation, and monitoring checks ensuring the accuracy, consistency, and reliability of data assets, investigating and resolving discrepancies.
- Documented data flows, metrics, and definitions to strengthen data governance and discoverability across systems.

NextGen eStart, Submission Platform

Jan 2020 - Sep 2020

- Built and tuned SQL extracts and controlled deployments supporting recurring data delivery, reducing manual effort **~80%**.

Tools: Oracle, SQL Server, PostgreSQL, AWS, PL/SQL, T-SQL, IBM DataStage, Python, Apache Airflow

PROJECTS

Enterprise Data Lakehouse (Payments Platform)

- Built an enterprise-scale data lakehouse and curated data models on AWS (S3, PySpark, Delta Lake) with data validation and governance for trusted, analytics-ready data.

Tools: AWS S3, PySpark, Delta Lake, Glue, Athena, Python, Git

Supply Chain Operations Analytics Platform (LDIP)

- Built a supply-chain operations analytics platform (late-delivery risk, supplier performance) with SQL data models and BI dashboards surfacing operational and performance metrics.

Tools: SQL, Python, Apache Airflow, BigQuery, Tableau, Power BI

EDUCATION

Master of Science in Information Systems

Dec 2025

University of Maryland, Robert H. Smith School of Business

College Park, MD

Bachelor of Technology in Electronics & Communication Engineering

May 2019

Manakula Vinayagar Institute of Technology

Puducherry, India