

Adithya Malaraju

AI Engineer — Enterprise Automation, Knowledge Graphs, Data Engineering
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PROFESSIONAL SUMMARY

AI Engineer with 5+ years of experience building scalable data pipelines, enterprise automation platforms, and knowledge graph systems. Reduced manual work package processing by 95% (40+ hrs/wk to under 2 hrs) for 26,000+ orders via Python and LangChain. Achieved 90% automated code translation across 27 microservices using Graph RAG with Neo4j and DSPy. Specializes in Generative AI, Agentic AI, LLMs, RAG, data science, data engineering, ETL, machine learning, and cloud architectures (AWS, Azure).

TECHNICAL SKILLS

Languages: Python, TypeScript, SQL, Cypher, Scala, Bash

AI/ML: LLMs, GenAI, Agentic AI, NLP, RAG, Prompt Engineering, LLMops/MLOps, DSPy, LangChain, OpenAI API, Anthropic API

Data & Cloud: Spark, PySpark, Databricks, Kafka, Airflow, dbt, Snowflake, BigQuery, ETL, AWS (S3, Lambda), Azure (Synapse, Data Factory)

Databases: Neo4j (GraphDB), Milvus (VectorDB), Redis, DynamoDB, Knowledge Graphs

DevOps & Tools: Docker, Kubernetes, CI/CD, Git, FastAPI, LangGraph, Tableau, REST

WORK EXPERIENCE

AI Engineer | Infinite Computer Solutions | Irving, TX

April 2025 - Present

- Built 0-to-1 automation platform for enterprise client, reducing manual work package processing by 95% (40+ hrs/wk to 2 hrs) across 26,000+ orders via Python with SHA-256 delta detection
- Delivered code translation product for enterprise client, achieving 90% success rate across 27 microservices via Graph RAG with Neo4j, Milvus, and DSPy-orchestrated self-repair
- Eliminate LLM non-determinism in client's production SQL generation via Jinja2 template library backed by Neo4j semantic graph for mainframe-to-BigQuery migration
- Cut manual code review from 70% to 30% via compiler-in-the-loop validation with OpenAI/Anthropic API feedback loops, delivering 15x speedup at under \$50 per service
- Deliver end-to-end LLM observability across 3 client platforms via Langfuse tracing with DSPy and FastAPI, building 8 analytics dashboards for SLA compliance on 26,977 orders
- Ship 0-to-1 agentic product through 3 architectural generations (Manual, Strict, Agentic) for enterprise client, with autonomous IR Discovery Agents and multi-language AST parsing via tree-sitter

Data Engineer | IB Technologies | Franklin, TN

July 2024 - April 2025

- Led on-premises SQL Server to Azure Synapse migration using Polybase and Azure Data Factory, maintaining 99.9% data integrity with phased validation and checksums
- Architected ETL workflows with ADF orchestration and Databricks compute, designing an Operational Data Store (ODS) improving query performance 30% and data throughput 25%
- Led cross-team deployment standardization across DBAs, support, and QA via validation gates and runbooks, cutting deployment time 40% and manual intervention 60%
- Optimized T-SQL stored procedures and triggers via execution plan analysis, converting cursors to set-based logic and automating SSIS scheduling, boosting data efficiency 35%

Data Engineer | EPAM Systems | Hyderabad, India

January 2020 - April 2022

- Engineered a real-time Change Data Capture (CDC) notification system processing change events from 300+ tables using AWS Lambda and SQS, reducing data delays by 20%
- Integrated healthcare datasets into an AWS S3 Data Lake with multi-layer architecture (raw/processed/curated) and Parquet optimization, reducing retrieval time by 20%

Data Engineer | CloudTern Solutions | Hyderabad, India

January 2019 - December 2019

- Authored ETL pipelines in Azure Data Factory with parallel execution and validation steps, cutting processing time 50% and boosting accuracy 20%
- Generated Data Definition Language (DDL) scripts for 300+ tables programmatically with schema validation, cutting migration time 50% and errors 70%

EDUCATION

Master of Science, Computer Information Systems - Colorado State University (GPA: 3.6/4.0)

January 2023 - May 2024

Bachelor of Technology, Information Technology - JNTU Hyderabad

May 2019

CERTIFICATIONS

Google Cloud Professional Data Engineer (GCP PDE) - Google Cloud