

AJAY BABU BELLAMKONDA

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GitHub: <https://github.com/Ajay3592>

Portfolio: <https://ajay3592.github.io/portfolio/>

PROFESSIONAL SUMMARY

Data Engineer & AI Practitioner with 8+ years of experience in designing scalable ETL pipelines and cloud data platforms on Azure, combined with hands-on expertise in Agentic AI solutions. Skilled in PySpark, Delta Lake, Azure Synapse, and CDC implementations, along with modern AI frameworks such as LangChain, LangGraph, LangSmith, and Vector DB for RAG, workflow orchestration, and intelligent automation. Focused on bridging Data Engineering and Agentic AI to deliver scalable, enterprise-grade solutions.

PROFESSIONAL EXPERIENCE

NTT DATA – Senior Data Engineer

Hyderabad, India | Apr 2023 – June 2025

- Designed an AI-powered code assistant using LangChain + OpenAI APIs, capable of generating Python/SQL code from natural language and reviewing existing code for bugs, performance, and compliance with coding standards.
- Developed an enterprise knowledge chatbot that retrieves context-aware answers from Confluence pages using Retrieval-Augmented Generation (RAG) with LangChain, Pinecone, and LLMs
- Built an NLP-driven SQL query system allowing business users to query Delta tables with plain English questions
- Spearheaded development of scalable ETL/ELT pipelines using PySpark and Azure Data Factory, accelerating data delivery by 20% and enhancing pipeline reliability.
- Engineered modular, reusable data components that streamlined development workflows, cutting engineering effort and costs by 25%.
- Built and managed a robust Delta Lake architecture with multi-layered bronze, silver, and gold data models, enabling versioned analytics through SCD Type 2 implementation.
- Designed real-time Change Data Capture (CDC) logic using efficient MERGE operations, improving data accuracy and consistency in analytics platforms.
- Automated end-to-end data replication from on-premise SQL Server to Azure Data Lake Storage Gen2 via Qlik Replicate, increasing data availability and reducing refresh cycles.
- Processed and transformed structured and semi-structured data (CSV, JSON) daily, ensuring high data throughput and scalability.
- Developed and deployed a supervised classification model using Scikit-learn, boosting IT support ticket classification efficiency by 70%.
- Facilitated Agile ceremonies including sprint planning and backlog grooming, ensuring predictable delivery of data engineering milestones.

TATA Consultancy Services (TCS) – Data Engineer

Hyderabad, India | Mar 2020 – Apr 2023

- Built high-throughput data ingestion pipelines in Azure Databricks, driving a 30% uplift in ETL job performance and reducing data latency.
- Automated address matching processes using NLP-based Python solutions, slashing manual reconciliation efforts by 90%.
- Created comprehensive data profiling and validation frameworks in PySpark, reinforcing data governance and improving data reliability.

TATA Consultancy Services (TCS) – Software Engineer

Hyderabad, India | Mar 2017 – Apr 2023

- Led migration of business-critical applications from WebSphere 7.0 to 8.5, improving application stability and reducing technical debt.
- Developed and maintained modular Python and Shell scripts that automated recurring ETL tasks, saving 180+ hours annually across data teams.

TECHNICAL SKILLS

Version Control & CI/CD: Git, GitHub

Databases: MySQL, SQL Server

ML & Data Science: Scikit-learn, Pandas, NumPy, Seaborn, Matplotlib

Application Development: Streamlit, FastAPI

AI & Agentic Tools: LangChain, LangGraph, LangSmith, Pinecone Vector DB

Data Engineering Tools: Qlik Replicate, SCD Type 2, CDC, ETL/ELT Design, Data Modeling, Data Quality

Big Data Technologies: Hadoop, Hive, Delta Lake

Cloud Platforms: Microsoft Azure (Synapse, Data Factory, Data Lake, SQL Database, Databricks)

Programming Languages: Python, PySpark, SQL, Shell Scripting, C, C++

EDUCATION

M.Tech in Electronics & Communication Engineering

Rajiv Gandhi University of Knowledge Technologies, Nuzvid | 2016 | CGPA: 8.55/10

B.Tech in Electronics & Communication Engineering

Dhanekula Institute of Engineering and Technology, Vijayawada | 2013 | Score: 81%