

MUKUL DESAI

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Professional Summary

Data Engineer with 2+ years of experience in ETL/ELT pipeline design, cloud data architecture, and AI-powered system development across healthcare and financial services, delivering reliable data infrastructure that processes millions of records and drives faster operational decisions.

Technical Skills

Languages: Python (Pandas, NumPy, PySpark), SQL, R

Data Engineering: ETL/ELT Pipelines, Data Modeling, Apache Airflow, dbt, Kafka, Flink, Medallion Architecture

Platforms & Databases: Snowflake, Databricks, PostgreSQL, MongoDB, MySQL, Apache Spark

Cloud & DevOps: AWS (S3, RDS, IAM, CloudWatch), Docker, Jenkins, CI/CD Pipelines

Analytics & BI: Power BI, Tableau, KPI Development, Dashboard Design

AI & ML: LangChain, OpenAI GPT, RAG Pipelines, ChromaDB, Vector Databases, Scikit-learn, FastAPI

Experience

LTI Mindtree (Client: Johnson & Johnson)

Nov 2025 – Present

Data Engineer & Automation Engineer

Raritan, NJ

- Built real-time file monitoring and validation pipelines across **6+ enterprise applications**, eliminating **15+ hours/week** of manual production support.
- Automated Salesforce access provisioning via **IAM** and **ServiceNow**, cutting provisioning cycle time by **60%** and eliminating manual coordination across **3 teams**.
- Built **Jenkins** CI/CD pipelines reducing average deployment time by **65%** and standardizing release workflows across multiple repositories for the QA team.

TripForCure Inc.

Sep 2024 – Oct 2025

AI & Data Platform Engineer

June 2025 – Oct 2025 | *Plainsboro, NJ*

- Built a **RAG pipeline** using **LangChain**, **GPT-4**, and **ChromaDB** to match patients with hospitals across **31 locations**, serving **500+ clinical stakeholders** via Power BI dashboards.
- Migrated full data infrastructure to **AWS** (S3, RDS, IAM, CloudWatch) with **zero downtime**, improving system reliability and compliance posture.
- Automated data workflows using **Python**, **FastAPI**, and **Airflow**, cutting manual data preparation time by **70%** for downstream reporting teams.

Business Intelligence & Data Engineering Intern

Sep 2024 – May 2025 | *Plainsboro, NJ*

- Built ETL pipelines in **Python** and **SQL** consolidating healthcare data from **31 hospital locations** into **Snowflake**, cutting manual consolidation effort by **80%**.
- Implemented **dbt** transformations with automated quality checks across staging and mart layers, achieving **99.9%** dataset accuracy across **7 production models**.
- Designed **Power BI** dashboards tracking clinical KPIs for **500+ operational stakeholders** across clinical and operational teams.

Larsen & Toubro Technology Services

Aug 2021 – Sep 2021

Data Analyst Intern

Mumbai, India

- Built **Tableau** dashboards and **SQL** workflows tracking project performance and financial metrics across **5+ engineering units**, cutting manual reporting effort by **40%**.
- Analyzed cost and resource utilization data across **5+ projects** to surface trends informing quarterly planning decisions for senior management.

Projects

ZeroDay – Multi-Agent AI Developer Onboarding | *LangChain, OpenAI, ChromaDB, FastAPI, Next.js* Jul 2025

- Built a **4-agent AI system** using **LangChain** and **OpenAI** with **ChromaDB** vector search for **sub-second** semantic retrieval across enterprise codebases, reducing onboarding queries by **40%**.

Real-Time Financial Risk & Fraud Detection Pipeline | *Kafka, Flink, Scikit-learn, PyOD, PostgreSQL* Mar 2025

- Built a fault-tolerant **Kafka** and **Flink** streaming pipeline with **AI-powered anomaly detection** cutting fraud detection from hours to seconds; engineered **VaR**, **CVaR**, and Sharpe/Sortino risk models improving accuracy by **23%**.

Education

Northeastern University

Sep 2023 – May 2025

Master of Science, Information Systems

Boston, MA

University of Mumbai – VESIT

Aug 2019 – May 2023

Bachelor of Engineering, Electronics & Telecommunications

Mumbai, India

Certifications

IBM Data Engineering Professional Certificate

Dec 2024

Google Cloud Data Analytics Specialization

Nov 2024