AZURE DATA ENGINEERING

Build cloud data pipelines. Engineer real-world solutions.

3-YEAR EXPERIENCE TRACK

COURSE FEE

INR 19,999/- ~~INR 79,980/-~~

75% OFF

SAVE INR 59,981

Learn the skills employers and clients look for

01 **AZURE DATA PIPELINES**
Build and orchestrate cloud-based ETL/ELT workflows.

02 **BIG DATA & LAKEHOUSE**
Work with Databricks, PySpark, Delta Lake and ADLS Gen2.

03 **PRODUCTION ENGINEERING**
Practise monitoring, security, CI/CD and troubleshooting.

THREE CAREER & EARNING PATHWAYS

GET HIRED
Prepare for Azure Data Engineer roles.

FREELANCE
Take on data integration projects.

BUILD
Create data-driven apps and platforms.

5 INDUSTRY PROJECTS • 1 ENTERPRISE CAPSTONE

Career guidance and practical project experience; employment or income is not guaranteed.

FEEDNET TEACH
LEARN • BUILD • INNOVATE

COURSE CURRICULUM

FOUNDATION TO AZURE PIPELINE ENGINEERING

Build core engineering capability, then apply it across Azure data services.

01

SQL & RELATIONAL DATABASE FUNDAMENTALS

- Advanced SQL, joins, CTEs, subqueries and window functions
- Keys, constraints, indexing, OLTP design and query optimization
- Hands-on: relational database and business SQL queries

02

PYTHON FOR DATA ENGINEERING

- Reusable functions, file handling, CSV, JSON and Parquet
- Pandas, APIs, logging, exceptions, retries and configuration
- Hands-on: reusable ingestion and transformation utility

03

DATA WAREHOUSING & DATA MODELLING

- OLTP vs. OLAP, dimensional modelling, fact and dimension tables
- Star/snowflake schemas, surrogate keys and SCD Types 1, 2 and 3
- Hands-on: sales data warehouse model

04

ETL & ELT PIPELINE ENGINEERING

- Staging, full/incremental loads, CDC and watermark patterns
- Idempotency, deduplication, backfills, schema evolution and recovery
- Hands-on: end-to-end ingestion and transformation pipeline

05

BIG DATA WITH APACHE SPARK & PYSPARK

- Spark architecture, driver/executors, partitions and lazy evaluation
- DataFrame transformations, joins, aggregations and performance tuning
- Hands-on: large-scale dataset processing

06

AZURE CLOUD & DATA SERVICES

- Azure resource model, ADLS Gen2, Blob Storage and Azure SQL
- ADF, Databricks, Synapse, RBAC, managed identities and Key Vault
- Hands-on: cloud environment and batch ingestion pipeline

07

AZURE DATA FACTORY & PIPELINE DEVELOPMENT

- Linked services, datasets, integration runtimes and Copy Activity
- Control flow, dynamic expressions, parameters and metadata-driven design
- REST/API ingestion, triggers, debugging and monitoring
- Hands-on: multi-source ADF pipeline

08

DATA LAKE, LAKEHOUSE & DELTA LAKE

- Bronze, Silver and Gold medallion architecture
- Parquet, Delta tables, ACID transactions and time travel
- Schema enforcement/evolution, partitioning and file optimization
- Hands-on: ADLS Gen2 lakehouse

PRODUCTION, STREAMING & DELIVERY

Develop the practices used to build, deploy and support enterprise data platforms.

09 AZURE DATABRICKS & ADVANCED PYSPARK

- Workspaces, clusters, notebooks, jobs and workflows
- Delta MERGE, CDC, SCD, incremental processing and Unity Catalog
- Performance tuning and production job development

10 AZURE SYNAPSE ANALYTICS & WAREHOUSING

- Dedicated/serverless SQL pools, external tables and data loading
- Distribution, partitioning, query performance and ADF integration
- Hands-on: analytical warehouse with Synapse SQL and ADLS

11 WORKFLOW ORCHESTRATION & SCHEDULING

- DAGs, dependencies, triggers, retries, timeouts and SLAs
- ADF orchestration, Databricks Workflows and reusable frameworks
- Hands-on: orchestrate ADF, Databricks and Azure SQL

12 DATA QUALITY, GOVERNANCE & SECURITY

- Accuracy, completeness, consistency, validity, uniqueness and timeliness
- Validation, reconciliation, lineage and Microsoft Purview fundamentals
- RBAC, Key Vault, managed identities, PII and auditing

13 REAL-TIME DATA ENGINEERING & STREAMING

- Batch vs. streaming, event-driven design and Azure Event Hubs
- Stream Analytics, Spark Structured Streaming and checkpointing
- Hands-on: real-time event ingestion and processing

14 PRODUCTION, DEVOPS & CI/CD

- Git, Azure Repos/GitHub, branching, pull requests and code reviews
- Environment promotion, CI/CD, deployment and infrastructure-as-code basics
- Monitoring, alerts, troubleshooting, incident recovery and cost optimization

15 ADVANCED PATTERNS & INTERVIEW PREPARATION

- Metadata-driven frameworks, CDC, late-arriving data and restartability
- Architecture design, production scenarios and root-cause analysis
- SQL, Python, PySpark, Azure interviews and project walkthroughs

PROJECT-BASED LEARNING

01 Azure end-to-end ETL pipeline

02 Metadata-driven ADF integration

03 ADLS + Databricks Lakehouse

04 Event Hubs real-time streaming

05 Production deployment with CI/CD

CAPSTONE Enterprise Azure Data Platform