SkillSprintTech
From Basics To Breakthrough

Learn the Skills that Tech Companies hire for

Azure Data Engineering

What Sets Us Apart:

- Industry-Driven Curriculum
- Trainers with 10+ Years of Experience
- Hands-On Projects & Capstone Assignments
- Hybrid Learning: Online & Offline in Pune
- Career Support & Interview Prep

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About the program

Welcome to the Fascinating World of Data Engineering with Azure

Are you prepared to harness the potential of data and influence the future? In our data-driven society, the ability to extract valuable insights from extensive information is an increasingly coveted asset. This all-encompassing **Azure Data Engineering course** is tailored to provide you with the knowledge and expertise necessary to excel in this dynamic field of data engineering.

Why Choose Data Engineering with Azure?

Data engineering is more than just a trendy term, it's a groundbreaking discipline transforming industries worldwide. From healthcare and finance to marketing and entertainment, data engineers leverage their expertise to tackle complex challenges, make informed decisions, and foster innovation. As a data engineer with Azure certification, you will be at the forefront of this transformation, using data to shape the future.

Abundant Career Opportunities:

- **Data Engineer:**
  Design, build, and maintain data pipelines and infrastructure on Azure.

- **Data Analyst:**
  Gather, clean, and interpret data to uncover trends and patterns.

This course is your gateway to a rewarding and impactful career in data engineering with Azure. Let's embark on this exciting journey together!

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Module 1: Introduction to Azure & Data Engineering

KEY TOPICS :

- Overview of Azure ecosystem
- Introduction to Data Engineering
- Understanding certification exam structure
- Azure portal, subscriptions, and resource group

Module 2: Data Storage in AZURE

KEY TOPICS :

- Azure Storage accounts
- Blob Storage and Data Lake Gen2
- Lifecycle policies and tiering
- Mounting ADLS in Databricks

Module 3: Data Ingestion in Azure

KEY TOPICS :

- Ingesting data using Azure Data Factory (ADF)
- Copy activity, linked services, datasets
- Ingest data from on-prem, cloud, APIs
- Data ingestion with Azure Synapse pipelines

Module 4: Azure Data Factory

KEY TOPICS :

- Triggers and scheduling
- Mapping vs Wrangling Data Flows
- Parameterization and dynamic content
- Monitoring and pipeline logging

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Module 5: Azure Stream Analytics & Event Ingestion

KEY TOPICS :

- Real-time data processing
- Azure Event Hubs, IoT Hub, Event Grid
- Ingesting and analyzing streams
- Output sinks and windowing

Module 6: Batch and Stream Processing with Azure Databricks

KEY TOPICS :

- Introduction to Apache Spark
- Cluster setup and notebooks
- Structured Streaming in Spark
- Delta Lake, caching, and job orchestration

Module 7: Data Transformation and Enrichment

KEY TOPICS :

- Data wrangling with PySpark
- Delta Lake (ACID transactions, time travel)
- Schema enforcement and data cleansing
- Workflows in Databricks

Module 8: Data Integration with Azure Synapse Analytics

KEY TOPICS :

- Dedicated SQL pool vs Serverless pool
- T-SQL for data analysis
- Synapse Studio setup
- Integrating with Azure Data Lake

Module 9: Data Modeling and Partitioning

KEY TOPICS :

- Star/Snowflake schema
- Partitioning strategies
- Columnstore indexes
- Performance tuning

Module 10: Data Governance and Lineage

KEY TOPICS :

- Microsoft Purview introduction
- Data catalogs, classifications
- Data lineage tracking
- Integration with Azure services

Module 11: CI/CD for Data Pipelines

KEY TOPICS :

- Git integration (ADF, Synapse, Databricks)
- DevOps workflow
- ARM, Bicep, YAML deployments
- Unit testing and pipeline promotion

Module 12: Exam Preparation & Real-World Project

KEY TOPICS :

- Project using ADF, Databricks & Synapse
- Case study: End-to-end data pipeline
- Databricks certification exam pattern and question practice

Summary

This curriculum provides a structured path for learning Data Engineering using Azure and Databricks, starting from the basics and progressing to advanced topics. By completing these modules, learners will gain the skills necessary to design and implement scalable data pipelines, perform big data processing with Apache Spark and build end-to-end analytics solutions using services like Azure Data Factory, Azure Data Lake, Azure Synapse, and Databricks.