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AZURE DATA FACTORY

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- *What is Big Data Analytics and Advantages of it?*
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Redfining Careers

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- *What are ARM Templates?*
- *Deployment using ARM Templates*
- *Deployment of Azure Data Factory Pipelines in Dev/Test/Prod Environments*

AZURE DATABRICKS

Chapter 01: Azure Databricks Overview :

- *Big Data Introduction*
 - *What is Big Data & Types of Big Data*
 - *Sources of Big Data*
 - *Characteristics of Big Data (5 V's)*
 - *What is Big Data Analytics and Advantages of it?*
 - *Implementation of Big Data Analytics?*
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 - *Creating Azure Databricks Cluster*
 - *Azure Databricks Pricing and Azure Cost Control*
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- *Data Types, Functions*
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- *RDDs, Dataframe and Data Source API Overview*
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- *Reading and writing data from and to ADLS Gen2*
- *Reading and writing data from and to an Azure SQL database using native connectors*
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- *Reading and writing data from and to Azure Cosmos DB*
- *Reading and writing data from and to CSV and Parquet*

- Reading and writing data from and to JSON, including nested JSON

Chapter 06: Integrating with Azure Key Vault, App Configuration and Log Analytics :

Creating an Azure Key Vault to store secrets using the UI

- *Creating an Azure Key Vault to store secrets using ARM templates*
- *Using Azure Key Vault secrets in Azure Databricks*
- *Creating an App Configuration resource*
- *Using App Configuration in an Azure Databricks notebook*
- *Creating a Log Analytics workspace*
- *Integrating a Log Analytics workspace with Azure Databricks*

Chapter 07: Spark SQL

- *Introduction and Spark SQL Architecture*
- *Databases, Managed Tables and External Tables*
- *Conversion of different sources to Tables*
- *Functions (Aggregation/Window/Ranking) and Joins*
- *Using query parameters and filters*
- *Introduction to visualizations in Databricks SQL*
- *Creating dashboards in Databricks SQL*
- *Connecting Power BI to Databricks SQL*

Chapter 08: Understanding Spark Query Execution :

- *Introduction to jobs, stages, and tasks*
- *Checking the execution details of all the executed Spark queries via the Spark UI*
- *Deep diving into schema inference*
- *Looking into the query execution plan*
- *How joins work in Spark*
- *Learning about input partitions and output partitions*
- *Learning about shuffle partitions*
- *Storage benefits of different file types*

Chapter 09: Exploring Delta Lake in Azure Databricks :

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- *Exploring Delta Lake in Azure Databricks*
- *Delta table operations – create, read, and write and Delta table data format*
- *History, Time Travel, Vacuum and Delta Lake Transaction Log*
- *Handling concurrency and Delta table performance optimization*
- *Constraints in Delta tables and Versioning in Delta tables*

Chapter 10: DevOps Integrations and Implementing CI/CD for Azure Databricks :

- *DevOps Integrations and Implementing CI/CD for Azure Databricks*
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- *Using Azure DevOps Git for Azure Databricks notebook version control*
- *Understanding the CI/CD process for Azure Databricks*
- *How to set up an Azure DevOps pipeline for deploying notebooks and Deploying notebooks to multiple environments*
- *Enabling CI/CD in an Azure DevOps build and release pipeline*
- *Deploying an Azure Databricks service using an Azure DevOps release pipeline:*

ADD-ONS:

- **Session on Azure Synapse**
- **Attendees Tasks Addressal**
- **Interview Perspective Session**
- **Mock Interviews**

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