

Build machine learning solutions using Azure Databricks (DP-3014)

Duration: 1 Day **Course Code: M-DP3014** **Delivery Method: Virtual Learning**

Overview:

Built as a joint effort by Microsoft and the team that started Apache Spark, Azure Databricks provides data science, engineering, and analytical teams with a single platform for big data processing and machine learning. In this course, you'll learn how to use Azure Databricks to train and deploy machine learning models.

Virtual Learning

This interactive training can be taken from any location, your office or home and is delivered by a trainer. This training does not have any delegates in the class with the instructor, since all delegates are virtually connected. Virtual delegates do not travel to this course, Global Knowledge will send you all the information needed before the start of the course and you can test the logins.

Target Audience:

Data scientists and machine learning engineers.

Objectives:

- Students will learn to,
- Explore Azure Databricks
- Use Apache Spark in Azure Databricks
- Train a machine learning model in Azure Databricks
- Use MLflow in Azure Databricks
- Tune hyperparameters in Azure Databricks
- Use AutoML in Azure Databricks
- Train deep learning models in Azure Databricks
- Manage machine learning in production with Azure Databricks

Prerequisites:

- This learning path assumes that you have experience of using Python to explore data and train machine learning models with common open source frameworks, like Scikit-Learn, PyTorch, and TensorFlow. Consider completing the Create machine learning models learning path before starting this one.

Content:

Module 1 : Explore Azure Databricks

- Provision an Azure Databricks workspace.
- Identify core workloads and personas for Azure Databricks.
- Use Data Governance tools Unity Catalog and Microsoft Purview
- Describe key concepts of an Azure Databricks solution.

Module 2 : Use Apache Spark in Azure Databricks

- Describe key elements of the Apache Spark architecture.
- Create and configure a Spark cluster.
- Describe use cases for Spark.
- Use Spark to process and analyze data stored in files.
- Use Spark to visualize data.

Module 3 : Train a machine learning model in Azure Databricks

- Prepare data for machine learning
- Train a machine learning model
- Evaluate a machine learning model

Module 4 : Use MLflow in Azure Databricks

- Use MLflow to log parameters, metrics, and other details from experiment runs.
- Use MLflow to manage and deploy trained models.

Module 5 : Tune hyperparameters in Azure Databricks

- Use the Hyperopt library to optimize hyperparameters.
- Distribute hyperparameter tuning across multiple worker nodes.

Module 6 : Use AutoML in Azure Databricks

- Use the AutoML user interface in Azure Databricks
- Use the AutoML API in Azure Databricks

Module 7 : Train deep learning models in Azure Databricks

- Train a deep learning model in Azure Databricks
- Distribute deep learning training by using the Horovod library

Module 8 : Manage machine learning in production with Azure Databricks

- Automate feature engineering and data pipelines
- Model development and training
- Model deployment strategies
- Model versioning and lifecycle management

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 0113 242 5931

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