

## **DP-604T00: Implement a data science and machine learning solution for AI with Microsoft Fabric**

### **Course Description**

Explore the data science process and learn how to train machine learning models to accomplish artificial intelligence in Microsoft Fabric. This training equips you with hands-on skills in notebooks, model tracking with MLflow, and deploying solutions for batch predictions—all within Microsoft Fabric's unified analytics platform.

**Duration** : 8 hours

### **Prerequisites**

You should be familiar with:

- Basic data concepts and terminology
- Fundamental understanding of machine learning workflows
- Experience working with structured data is helpful but not required

### **Learning Objectives**

By the end of this course, you'll be able to:

- Navigate Microsoft Fabric's tools for data science and machine learning
- Perform data exploration using notebooks and Data Wrangler
- Train, track, and manage ML models using MLflow within Fabric
- Deploy models and generate batch predictions using Delta tables
- Collaborate across teams within Fabric's unified environment

## **Table of Contents**

### **Module 01. Introduction to end-to-end analytics using Microsoft Fabric**

- Explore end-to-end analytics with Microsoft Fabric
- Explore data teams and Microsoft Fabric
- Enable and use Microsoft Fabric

### **Module 02. Get started with data science in Microsoft Fabric**

- Understand the data science process
- Explore and process data with Microsoft Fabric
- Train and score models with Microsoft Fabric
- Exercise - Explore data science in Microsoft Fabric

### **Module 03. Explore data for data science with notebooks in Microsoft Fabric**

- Explore notebooks
- Load data for exploration
- Understand data distribution
- Check for missing data in notebooks
- Apply advanced data exploration techniques
- Visualize charts in notebooks
- Exercise - Use notebook for data exploration in Microsoft Fabric

### **Module 04. Preprocess data with Data Wrangler in Microsoft Fabric**

- Understand Data Wrangler
- Perform data exploration
- Handle missing data
- Transform data with operators

- Exercise - Preprocess data with Data Wrangler in Microsoft Fabric

## **Module 05. Train and track machine learning models with MLflow in Microsoft Fabric**

- Understand how to train machine learning models
- Train and track models with MLflow and experiments
- Manage models in Microsoft Fabric
- Exercise - Train and track a model in Microsoft Fabric

## **Module 06. Generate batch predictions using a deployed model in Microsoft Fabric**

- Customize the model's behavior for batch scoring
- Prepare data before generating predictions
- Generate and save predictions to a Delta table
- Exercise - Generate and save batch predictions