

DP-100T01: Designing and Implementing a Data Science Solution on Azure

Course Description

Learn how to operate machine learning solutions at cloud scale using Azure Machine Learning. This course teaches you to leverage your existing knowledge of Python and machine learning to manage data ingestion and preparation, model training and deployment, and machine learning solution monitoring with Azure Machine Learning and MLflow.

Course Duration

4 days

Prerequisites

Successful Azure Data Scientists start this role with a fundamental knowledge of cloud computing concepts, and experience in general data science and machine learning tools and techniques. Specifically:

- Creating cloud resources in Microsoft Azure.
- Using Python to explore and visualize data.
- Training and validating machine learning models using common frameworks like Scikit-Learn, PyTorch, and TensorFlow.
- Working with containers To gain these prerequisite skills, take the following free online training before attending the course:
 - [Explore Microsoft cloud concepts.](#)
 - [Create machine learning models.](#)
 - [Administer containers in Azure](#) If you are completely new to data science and machine learning, please complete [Microsoft Azure AI Fundamentals](#) first.

Course Outline

- Prepare to develop AI solutions on Azure
- Design a data ingestion strategy for machine learning projects
- Design a machine learning model training solution
- Design a model deployment solution
- Explore Azure Machine Learning workspace resources and assets
- Explore developer tools for workspace interaction
- Make data available in Azure Machine Learning
- Work with compute targets in Azure Machine Learning
- Work with environments in Azure Machine Learning
- Find the best classification model with Automated Machine Learning
- Track model training in Jupyter notebooks with MLflow
- Run a training script as a command job in Azure Machine Learning
- Track model training with MLflow in jobs
- Run pipelines in Azure Machine Learning
- Perform hyperparameter tuning with Azure Machine Learning



- Deploy a model to a managed online endpoint
- Deploy a model to a batch endpoint



Who Should Attend

This course is designed for data scientists with existing knowledge of Python and machine learning frameworks like Scikit-Learn, PyTorch, and Tensorflow, who want to build and operate machine learning solutions in the cloud.