

Designing and Implementing a Data Science Solution on Azure

DP100 - Version: 1

 3 days 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 in Microsoft Azure.

Intended audience:

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.

Prerequisites:

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

Objectives:

Topics:

Module 1: Getting Started with Azure Machine Learning

- Introduction to Azure Machine Learning
- Working with Azure Machine Learning

Module 2: Visual Tools for Machine Learning

- Automated Machine Learning
- Azure Machine Learning Designer

Module 3: Running Experiments and Training Models

- Introduction to Experiments
- Training and Registering Models

Module 4: Working with Data

- Working with Datastores
- Working with Datasets

Module 5: Working with Compute

- Working with Environments
- Working with Compute Targets

Module 6: Orchestrating Operations with Pipelines

- Introduction to Pipelines
- Publishing and Running Pipelines

Module 7: Deploying and Consuming Models

- Real-time Inferencing
- Batch Inferencing
- Continuous Integration and Delivery

Module 8: Training Optimal Models

- Hyperparameter Tuning
- Automated Machine Learning

Module 9: Responsible Machine Learning

- Differential Privacy
- Model Interpretability
- Fairness

Module 10: Monitoring Models

- Monitoring Models with Application Insights
- Monitoring Data Drift