

Azure Machine Learning DP 100

Instructors:

Imran:

Working as Data Scientist with experience in solving real world business problems across different domains.

Curriculum:

Set up Azure Machine Learning Workspace

- Understand the AzureMLService Architecture
- Create the AzureML Workspace
- View and Manage Workspace Settings
- Overview of New AzureML Studio
- What is AzureML Datastore and Dataset
- Create and Register a Datastore
- Create a Dataset
- Explore the AzureML Dataset
- Understanding the AzureML Compute Resources
- Create a Compute Cluster and Compute Instance

Model Training and Run Experiment

- What is an AzureML Pipeline
- Create a pipeline using AzureML Designer

- Submit the Designer Pipeline run

Deploy and Consume the Models

- Create an Inference Pipeline
- Deploy a real-time endpoint using Designer
- Consume Model
- Create a batch inference pipeline using Designer
- Run a Batch Inference Pipeline from Designer
- Result

Data Processing using AzureML Designer

- Get Data to the workspace
- Import Data to the workspace from external sources
- Edit Metadata - Column Names
- Understanding the Run
- Edit Metadata - Data Type
- Export Data to the Blob Storage
- Add Columns to the Dataset
- Add Rows to the Dataset
- Normalization of Data Part 1
- Normalization of Data Part 2
- Clean Missing Data
- Partition and Sample Data Part 1
- Partition and Sample Data Part 2

Azure Machine Learning with Azure

- Introduction to AzureML SDK

Set Up Azure Machine Learning Workspace using sdk

- Create AzureML Workspace using SDK part 1
- Verify the Workspace and Write the Workspace Config File
- Create and Register a Datastore using AzureML SDK
- Create and Register a Dataset using SDK part 1
- Create and Register a Dataset using SDK part 2
- Access Workspace, Datastore and Datasets using SDK
- Pandas Dataframe and AzureML Dataset conversions
- Upload local data to storage account via datastore

Run Experiments and Train Models

- Set up
- Overview of Architecture
- Create Sample Experiment part 1
- Create Sample Experiment part 2
- Run Sample Experiment
- Azureml Environment part 1
- Azureml Environment part 2
- Azureml Environment part 3
- Azureml Environment part 4
- Azureml Environment part 5
- Train and Run a Model Script in AzureML Part 1

- Train and Run a Model Script in AzureML Part 2
- Train and Run a Model Script in AzureML Part 3
- Provisioning Compute Cluster Using SDK Part 1
- Provisioning Compute Cluster Using SDK Part 2
- Automate Model Training using AzureML SDK
- Define Pipeline Steps
- Define Training Steps
- Built the pipeline
- Command Line Arguments
- Data preparation script
- Training script
- Run the pipeline part 1
- Run the pipeline part 2
- Run the pipeline part 3

Using Python Scripts in AzureML

- Simple Python Script in Designer
- Execute Python Script using Zip Bundle
- Execute Python Script using Zip Bundle Demo