Advanced Machine Learning with Azure Databricks and Azure Machine Learning

Duration: 5 Day (40 hours)

Note: The course is an extension of Microsoft Official Course (DP-100) with an addition of Machine Learning with Azure Databricks and Time Series Forecasting using Azure Machine Learning

Yellow Highlighter indicates additional content as mentioned above

==========

Day 01:

Objective: Understand the Azure Machine Learning service including workspace and experiments

Learning Path:

- Explore the Azure Machine Learning workspace
- Work with data in Azure Machine Learning

Labs:

- Explore the Azure Machine Learning workspace
- Explore developer tools for workspace interaction
- Make data available in Azure Machine Learning

==========

Day 02:

Objective: Model training and optimize model training

Learning Path:

- Understanding compute and environment in Azure machine learning
- Run a training script as a command job in Azure Machine Learning
- Track model training with MLflow in jobs

Labs:

- Train a model with the Azure Machine Learning Designer
- Track model training in notebooks with MLflow
- Run a training script as a command job in Azure Machine Learning
- Use MLflow to track training jobs

- Log and register models with MLflow
- Work with compute resources in Azure Machine Learning
- Work with environments in Azure Machine Learning

==========

Day 03:

Objective: Automated Azure Machine Learning Service and Introduction to Databricks

Learning Path:

- Perform hyperparameter tuning with Azure Machine Learning
- Automate machine learning model selection with Azure Machine Learning
- Time-series forecasting with AutoML
- Introduction to Azure Databricks

Labs:

- Find the best classification model with Automated Machine Learning
- Time-series forecasting using Automated Machine Learning
- Attach a Databricks Cluster as an Attached Compute Target
- Mount Blob storage to Databricks and saving data to Azure blob storage from Databricks
- Get started with machine learning in Azure Databricks
- Use MLflow in Azure Databricks
- Perform hyperparameter tuning with a sweep job

==========

Day 04:

Objective: Machine learning in Azure Databricks

Learning Path:

- Model training in Azure Databricks
- Hyperparameter tuning in Azure Databricks

Labs:

- Optimize Hyperparameters for machine learning in Azure Databricks
- Train a model with AutoML
- Train a deep learning model

==========

Day 05:

Objective: Deploy and consume a model

Learning Path:

- Optimize model training with pipelines in Azure Machine Learning
- Deploy and consume models with Azure Machine Learning

Labs:

- Run pipelines in Azure Machine Learning
- Create and explore the Responsible AI dashboard
- Deploy a model to a batch endpoint
- Deploy a model to a managed online endpoint

==========