TechyEdz Solutions

Training | Consulting | Developement | Outsourcing

Azure Data Science Solution (DP-100)

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Azure - Designing and Implementing a Data Science Solution on Azure (DP-100)

Course Overview:

This learning path is designed to help you prepare for Microsoft's DP-100 Designing and Implementing a Data Science Solution on Azure exam. Even if you don't plan to take the exam, these courses and hands-on labs will help you learn how to use Azure's machine learning solutions.

Candidates who pass the DP-100 exam will earn the Microsoft Certified: Azure Data Scientist Associate certification.

Course Outline:

Set up an Azure Machine Learning Workspace

1. Create an Azure Machine Learning workspace

- create an Azure Machine Learning workspace
- configure workspace settings
- manage a workspace by using Azure Machine Learning studio

2. Manage data objects in an Azure Machine Learning workspace

- register and maintain data stores
- create and manage datasets

3. Manage experiment compute contexts

- create a compute instance
- determine appropriate compute specifications for a training workload
- create compute targets for experiments and training

Run Experiments and Train Models

1. Create models by using Azure Machine Learning Designer

- create a training pipeline by using Azure Machine Learning designer
- ingest data in a designer pipeline
- use designer modules to define a pipeline data flow
- use custom code modules in designer

2. Run training scripts in an Azure Machine Learning workspace

- create and run an experiment by using the Azure Machine Learning SDK
- consume data from a data store in an experiment by using the Azure Machine Learning SDK
- consume data from a dataset in an experiment by using the Azure Machine Learning SDK
- choose an estimator for a training experiment

3. Generate metrics from an experiment run

- log metrics from an experiment run
- retrieve and view experiment outputs
- use logs to troubleshoot experiment run errors

4. Automate the model training process

- create a pipeline by using the SDK
- pass data between steps in a pipeline
- run a pipeline
- monitor pipeline runs

Optimize and Manage Models

1. Use Automated ML to create optimal models

- use the Automated ML interface in Azure Machine Learning studio
- use Automated ML from the Azure Machine Learning SDK
- select scaling functions and pre-processing options
- determine algorithms to be searched
- define a primary metric
- get data for an Automated ML run
- retrieve the best model

2. Use Hyperdrive to tune hyperparameters

- select a sampling method
- define the search space
- define the primary metric
- define early termination options

- find the model that has optimal hyperparameter values

3. Use model explainers to interpret models

- select a model interpreter
- generate feature importance data

4. Manage models

- register a trained model
- monitor model history
- monitor data drift

Deploy and Consume Models

1. Create production compute targets

- consider security for deployed services
- evaluate compute options for deployment

2. Deploy a model as a service

- configure deployment settings
- consume a deployed service
- troubleshoot deployment container issues

3. Create a pipeline for batch inferencing

- publish a batch inferencing pipeline
- run a batch inferencing pipeline and obtain outputs

4. Publish a designer pipeline as a web service

- create a target compute resource
- configure an Inference pipeline
- consume a deployed endpoint

Prerequisites:

- Basic experience using Microsoft Azure

Who Should Attend:

The Azure Data Scientist applies their knowledge of data science and machine learning to implementing and running machine learning workloads on Azure; in particular, using Azure Machine Learning Service. This entails planning and creating a suitable working environment for data science workloads on Azure, running data experiments and training predictive models, managing and optimizing models, and deploying machine learning models into production.

Number of Hours: 30hrs

Certification: DP-100

Key Features:

- One to One Training
- Online Training
- Fastrack & Normal Track
- Resume Modification
- Mock Interviews
- Video Tutorials
- Materials
- Real Time Projects
- Virtual Live Experience
- Preparing for Certification