PhoenixTS

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MICROSOFT

# Microsoft Certified: Azure Data Scientist Associate

## Validate your technical skills and grow your career.

This certification demonstrates that the recipient has knowledge of the design and implementation of a data science solution on Azure, setting up an Azure machine learning workspace, the ability to run experiments and train, optimize, manage, deploy and consume models.

### Why Take The Microsoft Certified: Azure Data Scientist Associate DP-100 Exam?

The need AI tech professionals is going to increase dramatically in the near future and passing the exam will help you secure an excellent position in the industry.

### Increase Your Salary:

- The average salary for someone who holds a Microsoft Certified: Azure Data Scientist Associate certification is around $122,000.

### Abilities Validated By The Certification:

- Set up an Azure Machine Learning workspace
- Run experiments and train models
- Optimize and manage models
- Deploy and consume models

### Recommended Knowledge & Experience:

- Formal education background in statistics, mathematics and computer science.
- Expertise in at least one programming language supported on the cloud.
- Microsoft Certified Azure Fundamentals Certification (optional, but recommended)

## Exam Topics & Scoring:

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

**SET UP AN AZURE MACHINE LEARNING WORKSPACE (30-35%)**

***Create an Azure Machine Learning workspace***

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

***Manage data objects in an Azure Machine Learning workspace***

- register and maintain data stores
- create and manage datasets 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 (25-30%)**

***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

***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

***Generate metrics from an experiment run***

- log metrics from an experiment run
- retrieve and view experiment outputs
- use logs to troubleshoot experiment run errors 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 (20-25%)

### *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 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

### *Use model explainers to interpret models*

- select a model interpreter
- generate feature importance data Manage models
- register a trained model
- monitor model history
- monitor data drift

## DEPLOY AND CONSUME MODELS (20-25%)

### *Create production compute targets*

- consider security for deployed services
- evaluate compute options for deployment Deploy a model as a service
- configure deployment settings
- consume a deployed service
- troubleshoot deployment container issues Create a pipeline for batch inferencing
- publish a batch inferencing pipeline
- run a batch inferencing pipeline and obtain outputs Publish a designer pipeline as a web service
- create a target compute resource
- configure an Inference pipeline
- consume a deployed endpoint

Prepare for your exam:

The best way to prepare is with first-hand experience. Taking advantage of the opportunities that Phoenix TS provides will assist you with gathering all the knowledge and skills you'll need for certification.

# Phoenix TS Microsoft Certified: Azure Data Scientist Associate – Learning Pathways

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

  Course Overview Phoenix TS' 3-day instructor-led Microsoft Designing and Implementing a Data Science Solution on Azure training and certification boot camp in Washington, DC Metro, Tysons Corner, VA, Columbia, MD or Live Online  will instruct you how to operate machine learning solutions at cloud scale using Azure Machine Learning. This course teaches you to leverage […]

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## Exam Details

- Multiple choice, multiple answers
- Testing in person or online proctored exam
- 130 Min to take the test
- $150 test fee
- Available in English, Japanese, Korean, and Simplified Chinese