

## COURSE: 20774A Perform Cloud Data Science with Azure Machine Learning

The main purpose of the course is to give students the ability to analyze and present data by using Azure Machine Learning, and to provide an introduction to the use of machine learning with big data tools such as HDInsight and R Services.

### Summary

*Duration:* 5 days/ 40 hours

*Level:* 300\*

*Delivery method:* In class

*Language:* Bulgarian/English

\* The difficulty level is consistent with the widely accepted scale of technical difficulty of training on Microsoft Corp

### AUDIENCE:

- The primary audience for this course is people who wish to analyze and present data by using Azure Machine Learning.
- The secondary audience is IT professionals, Developers, and information workers who need to support solutions based on Azure machine learning.

### AFTER THE TRAINING ATTENDEES WILL BE ABLE TO:

- Explain machine learning, and how algorithms and languages are used
- Describe the purpose of Azure Machine Learning, and list the main features of Azure Machine Learning Studio; Upload and explore various types of data to Azure Machine Learning; Explore and use techniques to prepare datasets ready for use with Azure Machine Learning
- Explore and use feature engineering and selection techniques on datasets that are to be used with Azure Machine Learning
- Explore and use regression algorithms and neural networks with Azure Machine Learning; Explore and use classification and clustering algorithms with Azure Machine Learning; Use R and Python with Azure Machine Learning, and choose when to use a particular language; Explore and use hyperparameters and multiple algorithms and models, and be able to score and evaluate models
- Explore how to provide end-users with Azure Machine Learning services, and how to share data generated from Azure Machine Learning models

### TOPICS:

**Module 1.** Introduction to Machine Learning

**Module 2.** Introduction to Azure Machine Learning

**Module 3.** Managing Datasets

**Module 4.** Preparing Data for use with Azure Machine Learning

**Module 5.** Using Feature Engineering and Selection

**Module 6.** Building Azure Machine Learning Models

**Module 7.** Using Classification and Clustering with Azure machine learning models

**Module 8.** Using R and Python with Azure Machine Learning

**Module 9.** Initializing and Optimizing Machine Learning Models

**Module 10.** Using Azure Machine Learning Models

**Module 11.** Using Cognitive Services

**Module 12.** Using Machine Learning with HDInsight

**Module 13.** Using R Services with Machine Learning