



MS 20774

Perform Cloud Data Science with
Azure Machine Learning

Descrizione

Durata: 5

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.

Prerequisiti

In addition to their professional experience, students who attend this course should have:

Programming experience using R, and familiarity with common R packages

Knowledge of common statistical methods and data analysis best practices.

Basic knowledge of the Microsoft Windows operating system and its core functionality.

Working knowledge of relational databases.

Obiettivi

After completing this course, students 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

Explore and use the Cognitive Services APIs for text and image processing, to create a recommendation application, and describe the use of neural networks with Azure Machine Learning

Explore and use HDInsight with Azure Machine Learning

Explore and use R and R Server with Azure Machine Learning, and explain how to deploy and configure SQL Server to support R services.

Programma

Module 1: Int-ro-duc-tion to Mac-hi-ne Lear-ning

This module introduces machine learning and discussed how algorithms and languages are used.

Lessons

What is machine learning?

Introduction to machine learning algorithms

Introduction to machine learning languages

Module 2: Int-ro-duc-tion to Azu-re Mac-hi-ne Lear-ning

Describe the purpose of Azure Machine Learning, and list the main features of Azure Machine Learning Studio.

Lessons

Azure machine learning overview

Introduction to Azure machine learning studio

Developing and hosting Azure machine learning applications

Module 3: Ma-na-ging Da-ta-sets

At the end of this module the student will be able to upload and explore various types of data in Azure machine learning.

Lessons

Categorizing your data

Importing data to Azure machine learning

Exploring and transforming data in Azure machine learning

Module 4: Pre-pa-ring Data for use with Azu-re Mac-hi-ne Lear-ning

This module provides techniques to prepare datasets for use with Azure machine learning.

Lessons

Data pre-processing

Handling incomplete datasets

Module 5: Using Fea-tu-re En-gi-nee-ring and Se-lec-tion

This module describes how to explore and use feature engineering and selection techniques on datasets that are to be used with Azure machine learning.

Lessons

Using feature engineering

Using feature selection

Module 6: Building Azure Machine Learning Models

This module describes how to use regression algorithms and neural networks with Azure machine learning.

Lessons

Azure machine learning workflows

Scoring and evaluating models

Using regression algorithms

Using neural networks

Module 7: Using Classification and Clustering with Azure Machine Learning Models

This module describes how to use classification and clustering algorithms with Azure machine learning.

Lessons

Using classification algorithms

Clustering techniques

Selecting algorithms

Module 8: Using R and Python with Azure Machine Learning

This module describes how to use R and Python with Azure machine learning and choose when to use a particular language.

Lessons

Using R

Using Python

Incorporating R and Python into Machine Learning experiments

Module 9: Ini-tia-lizing and Op-ti-mizing Mac-hi-ne Lear-ning Mo-dels

This module describes how to use hyper-parameters and multiple algorithms and models, and be able to score and evaluate models.

Lessons

Using hyper-parameters

Using multiple algorithms and models

Scoring and evaluating Models

Module 10: Using Azu-re Mac-hi-ne Lear-ning Mo-dels

This module explores how to provide end users with Azure machine learning services, and how to share data generated from Azure machine learning models.

Lessons

Deploying and publishing models

Consuming Experiments

Module 11: Using Cog-ni-ti-ve Ser-vices

This module introduces the cognitive services APIs for text and image processing to create a recommendation application, and describes the use of neural networks with Azure machine learning.

Lessons

Cognitive services overview

Processing language

Processing images and video

Recommending products

Module 12: Using Mac-hi-ne Lear-ning with HDIn-sight

This module describes how use HDInsight with Azure machine learning.

Lessons

Introduction to HDInsight

HDInsight cluster types

HDInsight and machine learning models

Module 13: Using R Ser-vices with Mac-hi-ne Lear-ning

This module describes how to use R and R server with Azure machine learning, and explain how to deploy and configure SQL Server and support R services.

Lessons

R and R server overview

Using R server with machine learning

Using R with SQL Server



Corsi Personalizzati



Corsi One-TO-One



Corsi in aula



Corsi On-Site



Noleggio Aule



Formazione Finanziata