

- ET SOAK KURSUS

70-774 Perform Cloud Data Science with Azure Machine Learning

Dato:	5 certificeringsrettede kursusdage fra kl. 09.00 – ca. 16.00
Lokation:	Foldegade 33, 7100 Vejle
Pris pr. deltager:	Kr. 16.660,- ex. moms Prisen er inkl. kursusmaterialer samt forplejning. Eksklusiv certificering.
Instruktør:	Microsoft Certified Trainer Søren Agerbo
PC:	SOAK stiller PC og kursusmiljø til rådighed

Course Description

About this course

Through this course participants will be able to analyze and present data with Azure Machine Learning. It is an introduction to the Machine Learning technology also including other big data tools as for instance HDInsight and R Services. This course can be part of preparation for the Microsoft certification:

70-774: *Perform Cloud Data Science with Azure Machine Learning.*

Audience profile

If you want to be able to analyze and present data using Azure Machine Learning, this is the course for you. If your job-role means you have to support solutions that are based on Machine Learning and therefore you need knowledge of the subject, this is the course for you.

Prerequisites

Participants on this course should have variable experience i.a.

- 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.

At course completion

After 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. 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

Course Outline

Part 1: Introduction to Machine Learning

- What is machine learning?
- Introduction to machine learning algorithms
- Introduction to machine learning languages

Part 2: Introduction to Azure Machine Learning

- Azure machine learning overview
- Introduction to Azure machine learning studio
- Developing and hosting Azure machine learning applications

Part 3: Managing Datasets

- Categorizing your data
- Importing data to Azure machine learning
- Exploring and transforming data in Azure machine learning

Part 4: Preparing Data for use with Azure Machine Learning

- Data pre-processing
- Handling incomplete datasets

Part 5: Using Feature Engineering and Selection

- Using feature engineering
- Using feature selection

Part 6: Building Azure Machine Learning Models

- Azure machine learning workflows
- Scoring and evaluating models
- Using regression algorithms
- Using neural networks

Part 7: Using Classification and Clustering with Azure machine learning models

- Using classification algorithms
- Clustering techniques
- Selecting algorithms

Part 8: Using R and Python with Azure Machine Learning

- Using R
- Using Python
- Incorporating R and Python into Machine Learning experiments

Part 9: Initializing and Optimizing Machine Learning Models

- Using hyper-parameters
- Using multiple algorithms and models
- Scoring and evaluating Models

Part 10: Using Azure Machine Learning Models

- Deploying and publishing models
- Consuming Experiments

Part 11: Using Cognitive Services

- Cognitive services overview
- Processing language
- Processing images and video
- Recommending products

Part 12: Using Machine Learning with HDInsight

- Introduction to HDInsight
- HDInsight cluster types
- HDInsight and machine learning models

Part 13: Using R Services with Machine Learning

- R and R server overview
- Using R server with machine learning
- Using R with SQL Server