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

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Seminar | 4 Termine verfügbar | Teilnahmebescheinigung

Präsenz / Virtual Classroom | 32 Unterrichtseinheiten | Garantietermine vorhanden

Seminarnummer: 29921 | Herstellernummer: MOC-DP-100

Stand: 09.05.2025. Alle aktuellen Informationen finden Sie unter https://akademie.tuv.com/s/29921

Erwerben Sie die Kenntnisse über die Verwendung von Azure-Diensten zum Entwickeln, Trainieren und Bereitstellen von Lösungen für maschinelles Lernen. Der Kurs beginnt mit einem Überblick über Dienste, die Data Science unterstützen. Von dort aus konzentriert es sich auf die Verwendung von führendem Data Science-Dienst, dem Azure Machine Learning-Dienst, zur Automatisierung der DS-Pipeline.

Nutzen

You will learn

- about the data science process and the role of the data scientist. This is then applied to understand how Azure services can support and augment the data science process.
- how to use Azure Machine Learning service to automate the data science process end to end.
- about the machine learning pipeline and how the Azure Machine Learning service's AutoML and HyperDrive can automate some of the laborious parts of it.
- how to automatically manage and monitor machine learning models in the Azure Machine Learning service.

Zielgruppe

Dieser Kurs richtet sich an Datenwissenschaftler und Data Science bzw. KI Experten mit Verantwortlichkeiten für das Trainieren und den Einsatz von Modellen für maschinelles Lernen in Azure Cloud Umgebungen.

Voraussetzungen

- Azure Fundamentals, wie sie im Kurs MOC-AZ-900 vermittelt werden, um Azure Ressourcen anzulegen.
- Understanding of data science including how to prepare data, train models, and evaluate competing models to select the best one.
- How to program in the Python programming language and use the Python libraries: pandas, scikit-learn, matplotlib, and seaborn.

Inhalte des Seminars

Module 1: Getting Started with Azure Machine Learning

- Introduction to Azure Machine Learning
- Working with Azure Machine Learning

Module 2: Visual Tools for Machine Learning

- Automated Machine Learning
- Azure Machine Learning Designer

Module 3: Running Experiments and Training Models

- Introduction to Experiments
- Training and Registering Models

Module 4: Working with Data In this module, you will learn how to create and manage datastores and datasets in an Azure Machine Learning workspace, and how to use them in model training experiments.

- Working with Datastores and Datasets

Module 5: Working with Compute One of the key benefits of the cloud is the ability to leverage compute resources on demand, and use them to scale machine learning processes to an extent that would be infeasible on your own hardware. In this module, you'll learn how to manage experiment environments that ensure consistent runtime consistency for experiments, and how to create and use compute targets for experiment runs.

- Working with Environments and Compute Targets

Module 6: Orchestrating Operations with Pipelines Here you learn how to orchestrate these workloads as pipelines of connected steps. Pipelines are key to implementing an effective Machine Learning Operationalization (ML Ops) solution in Azure, so you'll explore how to define and run them in this module.

- Introduction to Pipelines
- Publishing and Running Pipelines

Module 7: Deploying and Consuming Models Models are designed to help decision making through predictions, so they're only useful when deployed and available for an application to consume. In this module learn how to deploy models for real-time inferencing, and for batch inferencing.

- Real-time Inferencing and Batch Inferencing
- Continuous Integration and Delivery

Module 8: Training Optimal Models In this module, you'll explore how you can use hyperparameter tuning and automated machine learning to take advantage of cloud-scale compute and find the best model for your data.

- Hyperparameter Tuning
- Automated Machine Learning

Module 9: Responsible Machine Learning This module explores some considerations and techniques for applying responsible machine learning principles.

- Differential Privacy, Model Interpretability and Fairness

Module 10: Monitoring Models After a model has been deployed, it's important to understand how the model is being used in production, and to detect any degradation in its effectiveness due to data drift. This module describes techniques for monitoring models and their data.

- Monitoring Models with Application Insights and Data Drift

Wichtige Hinweise

Dieser Kurs konzentriert sich auf Azure und vermittelt den Teilnehmern nicht den Umgang mit Datenwissenschaften. Es wird davon ausgegangen, dass die Teilnehmer dies bereits wissen.

Terminübersicht und Buchung

Buchen Sie Ihren Wunschtermin jetzt direkt online unter https://akademie.tuv.com/s/29921 und profitieren Sie von diesen Vorteilen:

- Schneller Buchungsvorgang
- Persönliches Kundenkonto
- Gleichzeitige Buchung für mehrere Teilnehmer:innen

Alternativ können Sie das Bestellformular verwenden, um via Fax oder E-Mail zu bestellen.