Hands On Guide To Machine Learning In Azure And Passing The Microsoft Certified

Are you interested in machine learning and want to enhance your skills? Look no further as this hands-on guide will take you through the world of machine learning in Azure and help you prepare for the Microsoft Certified exam.

Machine learning has gained immense popularity in recent years, thanks to its ability to analyze large volumes of data and generate valuable insights. Microsoft Azure, a cloud computing service, provides a range of tools and services for machine learning, making it an ideal platform for both beginners and advanced users.

The Importance of Machine Learning in Azure

Machine learning in Azure offers numerous benefits, including:

Azure Data Scientist Associate Certification Guide: A hands-on guide to machine learning in Azure and passing the Microsoft Certified DP-100 exam by Andreas Botsikas(1st Edition, Kindle Edition)

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- Scalability: Azure allows you to scale your machine learning projects based on your requirements. Whether you need to process a small dataset or train a model on a massive dataset, Azure has the infrastructure to handle it.

- Integration: Azure seamlessly integrates with other Microsoft services like Azure SQL Database, Azure IoT, and Power BI, allowing you to build end-to-end solutions effortlessly.

- Advanced tools: Azure provides a wide range of tools and libraries for machine learning, including Azure Machine Learning Studio, Azure Databricks, and Azure Machine Learning service.

Getting Started with Machine Learning in Azure

To get started with machine learning in Azure, you need to follow these steps:

Step 1: Setting Up Azure Account

If you don't already have an Azure account, you can sign up for a free trial or a paid subscription. Once you have your account, you can log in to the Azure portal and start creating machine learning resources.

Step 2: Understanding Azure Machine Learning Architecture

Azure Machine Learning follows a hierarchical architecture consisting of:

- Workspace: The top-level container for all the resources in Azure Machine Learning.

- Experiments: A collection of scripts, data files, and configurations that make up a machine learning workflow.

- Compute Targets: The infrastructure on which your machine learning experiments run, such as virtual machines or clusters.

- Models: Trained machine learning models that can be deployed and used for predictions.

Step 3: Creating and Running Experiments

With Azure Machine Learning, you can create and run experiments using a drag-and-drop interface or by writing code in Python. The platform helps you visualize and analyze your experiment results, making it easier to iterate and improve your models.

Step 4: Deploying and Consuming Models

Once you have trained a model, you can deploy it as a web service and consume it in your applications. Azure provides various deployment options, including Azure Container Instances, Azure Kubernetes Service, and Azure Functions.

Preparing for the Microsoft Certified Exam

Passing the Microsoft Certified: Azure AI Engineer Associate exam is a significant milestone for anyone looking to validate their machine learning skills in Azure. Here are some tips to help you prepare for the exam:

1. Study the Exam Objectives

The first step in your preparation should be to thoroughly understand the exam objectives. Microsoft provides detailed guidelines on the skills and knowledge you need to demonstrate to pass the exam.

2. Hands-On Practice

Practice is key when it comes to machine learning. Spend time working on real-world projects in Azure Machine Learning to gain practical experience and develop your skills.

3. Take Online Courses and Tutorials

There are several online courses and tutorials available that cover the topics tested in the exam. Take advantage of these resources to enhance your understanding and knowledge.

4. Join Study Groups or Forums

Collaborating with others who are also preparing for the exam can be immensely beneficial. Join study groups or online forums where you can discuss concepts, share resources, and ask questions.

5. Practice Sample Questions

Familiarize yourself with the exam format by practicing sample questions. This will help you understand the structure of the exam and identify areas where you need to focus more.

6. Review Documentation and Whitepapers

Microsoft provides comprehensive documentation and whitepapers on Azure Machine Learning. Review these resources to deepen your understanding of the platform and its capabilities.

7. Stay Updated with Azure Updates

Azure constantly evolves, introducing new features and updates. Stay up-to-date with the latest developments to ensure you are well-prepared for the exam.

Machine learning in Azure offers a powerful platform for individuals and organizations to build and deploy machine learning models. By following this hands-on guide and preparing for the Microsoft Certified exam, you can enhance your skills and validate your knowledge in this rapidly growing field.

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Develop the skills you need to run machine learning workloads in Azure and pass the DP-100 exam with ease

Key Features

- Create end-to-end machine learning training pipelines, with or without code

- Track experiment progress using the cloud-based MLflow-compatible process of Azure ML services

- Operationalize your machine learning models by creating batch and real-time endpoints

Book Description

The Azure Data Scientist Associate Certification Guide helps you acquire practical knowledge for machine learning experimentation on Azure. It covers everything you need to pass the DP-100 exam and become a certified Azure Data Scientist Associate.

Starting with an to data science, you'll learn the terminology that will be used throughout the book and then move on to the Azure Machine Learning (Azure ML) workspace. You'll discover the studio interface and manage various components, such as data stores and compute clusters.

Next, the book focuses on no-code and low-code experimentation, and shows you how to use the Automated ML wizard to locate and deploy optimal models for your dataset. You'll also learn how to run end-to-end data science experiments using the designer provided in Azure ML Studio.

You'll then explore the Azure ML Software Development Kit (SDK) for Python and advance to creating experiments and publishing models using code. The book also guides you in optimizing your model's hyperparameters using Hyperdrive before demonstrating how to use responsible AI tools to interpret and debug your models. Once you have a trained model, you'll learn to operationalize it for batch or real-time inferences and monitor it in production.

By the end of this Azure certification study guide, you'll have gained the knowledge and the practical skills required to pass the DP-100 exam.

What you will learn

- Create a working environment for data science workloads on Azure

- Run data experiments using Azure Machine Learning services

- Create training and inference pipelines using the designer or code

- Discover the best model for your dataset using Automated ML

- Use hyperparameter tuning to optimize trained models

- Deploy, use, and monitor models in production

- Interpret the predictions of a trained model

Who this book is for

This book is for developers who want to infuse their applications with AI capabilities and data scientists looking to scale their machine learning experiments in the Azure cloud. Basic knowledge of Python is needed to follow the code samples used in the book. Some experience in training machine learning models in Python using common frameworks like scikit-learn will help you understand the content more easily.

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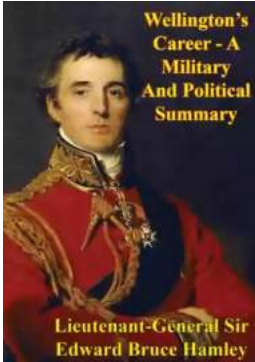
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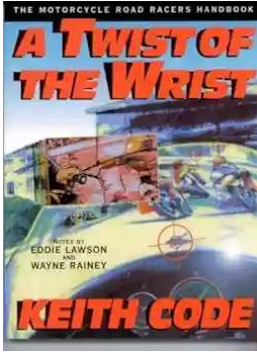
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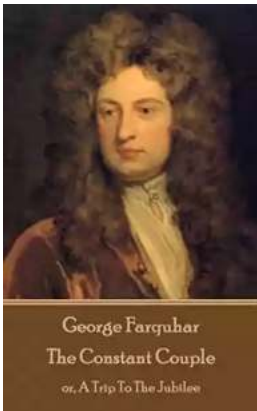
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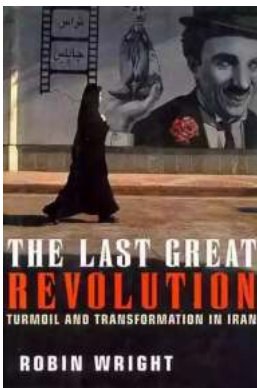
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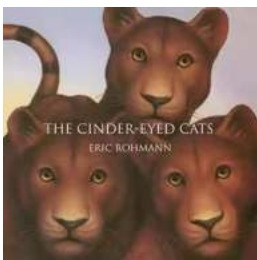
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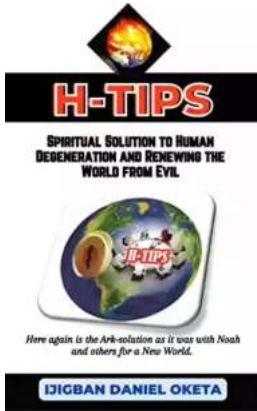
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