

A Comprehensive Hands-On Guide to Machine Learning in Azure and Passing the Microsoft Certified Azure AI Engineer Associate Exam

Machine learning (ML) is a rapidly growing field that is transforming the way we live and work. With its ability to automate tasks, improve decision-making, and uncover hidden patterns in data, ML is being used in a wide range of industries, from healthcare to finance to manufacturing.

If you're interested in a career in ML, or if you're simply looking to enhance your skills in this area, then becoming a Microsoft Certified Azure AI Engineer Associate is a great place to start. This certification validates your knowledge of Azure ML services, tools, and techniques, and it can help you to advance your career in ML.

This article provides a comprehensive hands-on guide to ML in Azure and covers the key concepts, tools, and techniques needed to pass the Microsoft Certified Azure AI Engineer Associate exam.



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

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Before we dive into the specifics of ML in Azure, let's first review some of the key concepts in ML.

- **Machine learning** is a type of artificial intelligence (AI) that allows computers to learn without being explicitly programmed.
- **Supervised learning** is a type of ML in which the computer is trained on a dataset of labeled data.
- **Unsupervised learning** is a type of ML in which the computer is trained on a dataset of unlabeled data.
- **Reinforcement learning** is a type of ML in which the computer learns by interacting with its environment.

Azure offers a comprehensive set of ML services that can be used to build, deploy, and manage ML models. These services include:

- **Azure Machine Learning Studio** is a cloud-based ML workbench that provides a drag-and-drop interface for building and training ML models.
- **Azure Machine Learning Service** is a fully managed ML service that provides a scalable and secure environment for deploying and managing ML models.

- **Azure Cognitive Services** is a collection of pre-built AI models that can be used to add AI capabilities to your applications.

Now that we've covered the key concepts in ML and the Azure ML services, let's walk through a hands-on example of how to build and deploy an ML model in Azure.

The first step is to create an Azure Machine Learning workspace. This workspace will serve as a central hub for all of your ML activities.

To create a workspace, follow these steps:

1. Sign in to the Azure portal.
2. Click on the **Create a resource** button.
3. Search for **Machine Learning** and select **Machine Learning Workspace**.
4. Enter a name for your workspace and select a location.
5. Click on the **Create** button.

The next step is to create a dataset. A dataset is a collection of data that you can use to train your ML model.

To create a dataset, follow these steps:

1. In the Azure Machine Learning workspace, click on the **Datasets** tab.
2. Click on the **+ Create Dataset** button.
3. Select the type of dataset you want to create.

4. Enter a name for your dataset and select a location.
5. Click on the **Create** button.

Once you have a dataset, you can train a model. A model is a representation of the relationship between the input data and the output data.

To train a model, follow these steps:

1. In the Azure Machine Learning workspace, click on the **Models** tab.
2. Click on the **+ Create Model** button.
3. Select the type of model you want to train.
4. Enter a name for your model and select a training dataset.
5. Click on the **Train** button.

Once you have a trained model, you can deploy it. A deployed model is a model that is available for use by applications.

To deploy a model, follow these steps:

1. In the Azure Machine Learning workspace, click on the **Models** tab.
2. Select the model you want to deploy.
3. Click on the **Deploy** button.
4. Select a deployment target.
5. Click on the **Deploy** button.

The Microsoft Certified Azure AI Engineer Associate exam is a challenging exam, but it is achievable with the right preparation. Here are some tips for passing the exam:

- **Study the official exam guide.** The official exam guide provides a detailed overview of the exam topics.
- **Take practice exams.** Practice exams are a great way to test your knowledge and identify areas where you need to improve.
- **Join a study group.** Study groups can provide support and motivation.
- **Get hands-on experience.** The best way to learn ML is by getting hands-on experience. Try building and deploying your own ML models in Azure.

ML is a rapidly growing field with a wide range of applications. If you're interested in a career in ML, or if you're simply looking to enhance your skills in this area, then becoming a Microsoft Certified Azure AI Engineer Associate is a great place to start. This certification validates your knowledge of Azure ML services, tools, and techniques, and it can help you to advance your career in ML.

This article has provided a comprehensive hands-on guide to ML in Azure and has covered the key concepts, tools, and techniques needed to pass the Microsoft Certified Azure AI Engineer Associate exam. By studying the official exam guide, taking practice exams, joining a study group, and getting hands-on experience, you can increase your chances of passing the exam and becoming a certified Azure AI Engineer.



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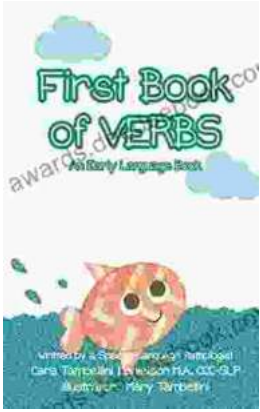
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