DP-100T01-A Designing and implementing a Data Science Solution on Azure References

#### MODULE 1

Microsoft Learn: Introduction to Azure Machine Learning

https://docs.microsoft.com/learn/modules/intro-to-azure-machine-learning-service

Azure Machine Learning architecture and concepts documentation

https://docs.microsoft.com/azure/machine-learning/concept-azure-machine-learning-architecture

Azure Machine Learning studio documentation

https://docs.microsoft.com/azure/machine-learning/overview-what-is-machine-learning-studio

Azure Machine Learning enterprise security documentation

https://docs.microsoft.com/azure/machine-learning/concept-enterprise-security

Azure Machine Learning Python SDK documentation

https://docs.microsoft.com/python/api/overview/azure/ml/intro

Azure Machine Learning extension for Visual Studio Code documentation

https://docs.microsoft.com/azure/machine-learning/tutorial-setup-vscode-extension

#### MODULE 2

Microsoft Learn: Create no-code predictive models with Azure Machine Learning

https://docs.microsoft.com/learn/paths/create-no-code-predictive-models-azure-machine-learning

Automated Machine Learning documentation

https://docs.microsoft.com/azure/machine-learning/concept-automated-ml

Designer documentation

https://docs.microsoft.com/azure/machine-learning/concept-designer

### MODULE 3

Microsoft Learn: Introduction to Azure Machine Learning

https://docs.microsoft.com/learn/modules/intro-to-azure-machine-learning-service

Microsoft Learn: Train a machine learning model with Azure Machine Learning https://docs.microsoft.com/learn/modules/train-local-model-with-azure-mls

Azure Machine Learning training run documentation

https://docs.microsoft.com/azure/machine-learning/how-to-set-up-training-targets

## **MODULE 4**

Microsoft Learn: Work with Data in Azure Machine Learning

https://docs.microsoft.com/learn/modules/work-with-data-in-aml/

Azure Machine Learning data documentation

https://docs.microsoft.com/azure/machine-learning/concept-data

#### MODULE 5

Microsoft Learn: Work with Compute in Azure Machine Learning

https://docs.microsoft.com/learn/modules/use-compute-contexts-in-aml/

Azure Machine Learning environments documentation

https://docs.microsoft.com/azure/machine-learning/concept-environments

Azure Machine Learning compute targets documentation

https://docs.microsoft.com/azure/machine-learning/concept-compute-target

Microsoft Learn: Perform data science with Azure Databricks

https://docs.microsoft.com/learn/paths/perform-data-science-azure-databricks/

#### **MODULE 6**

Microsoft Learn: Orchestrate machine learning with pipelines

https://docs.microsoft.com/learn/modules/create-pipelines-in-aml/

Azure Machine Learning pipelines documentation

https://docs.microsoft.com/azure/machine-learning/how-to-create-your-first-pipeline

Azure Machine Learning ML Ops documentation

https://docs.microsoft.com/azure/machine-learning/concept-model-management-and-deployment

Azure Machine Learning events documentation

https://docs.microsoft.com/azure/machine-learning/how-to-use-event-grid

## MODULE 7

Microsoft Learn: Deploy real-time machine learning services with Azure Machine Learning

https://docs.microsoft.com/learn/modules/register-and-deploy-model-with-amls

Microsoft Learn: Deploy batch inference pipelines with Azure Machine Learning

https://docs.microsoft.com/learn/modules/deploy-batch-inference-pipelines-with-azure-machine-learning

Azure Machine Learning model deployment documentation

https://docs.microsoft.com/en-us/azure/machine-learning/how-to-deploy-and-where

CI/CD with Azure Pipelines documentation

https://docs.microsoft.com/azure/devops/pipelines/targets/azure-machine-learning

CI/CD with GitHub Actions documentation

https://docs.microsoft.com/azure/machine-learning/how-to-github-actions-machine-learning

#### **MODULE 8**

Microsoft Learn: Tune hyperparameters with Azure Machine Learning

https://docs.microsoft.com/learn/modules/tune-hyperparameters-with-azure-machine-learning/

Microsoft Learn: Automate machine learning model selection with Azure Machine Learning <a href="https://docs.microsoft.com/learn/modules/automate-model-selection-with-azure-automl/">https://docs.microsoft.com/learn/modules/automate-model-selection-with-azure-automl/</a>

Azure Machine Learning hyperparameter tuning documentation

https://docs.microsoft.com/azure/machine-learning/how-to-tune-hyperparameters

Azure Machine Learning automated machine learning documentation

https://docs.microsoft.com/azure/machine-learning/how-to-configure-auto-train

## MODULE 9

Microsoft Learn: Explore differential privacy

https://docs.microsoft.com/learn/modules/explore-differential-privacy

Microsoft Learn: Explain machine learning models with Azure Machine Learning

https://docs.microsoft.com/learn/modules/explain-machine-learning-models-with-azure-machine-learning

Microsoft Learn: Detect and mitigate unfairness in models with Azure Machine Learning <a href="https://docs.microsoft.com/learn/modules/detect-mitigate-unfairness-models-with-azure-machine-learning">https://docs.microsoft.com/learn/modules/detect-mitigate-unfairness-models-with-azure-machine-learning</a>

Azure Machine Learning responsible ML documentation

https://docs.microsoft.com/azure/machine-learning/concept-responsible-ml

## MODULE 10

Microsoft Learn: Monitor models with Azure Machine Learning

https://docs.microsoft.com/learn/modules/monitor-models-with-azure-machine-learning

Microsoft Learn: Monitor data drift with Azure Machine Learning

https://docs.microsoft.com/learn/modules/monitor-data-drift-with-azure-machine-learning

Azure Machine Learning monitoring with Application Insights documentation

https://docs.microsoft.com/azure/machine-learning/how-to-enable-app-insights

Azure Machine Learning data drift documentation

https://docs.microsoft.com/azure/machine-learning/how-to-monitor-datasets

#### **MISCELANEOUS**

## Administer containers in Azure

https://docs.microsoft.com/learn/paths/administer-containers-in-azure

## **Use GitHub Actions with Azure Machine Learning**

<u>GitHub Actions for CI/CD - Azure Machine Learning | Microsoft Docs</u>

# **Getting Started with MLOpsPython**

MLOpsPython/getting started.md at master · microsoft/MLOpsPython (github.com)

# **Responsible AI principles from Microsoft**

https://www.microsoft.com/en-gb/ai/responsible-ai?activetab=pivot1%3aprimaryr6

# **Responsibel AI Resources**

Responsible Al Resources - Microsoft Al

## Microsoft Approach to responsible Al

Our approach to responsible AI at Microsoft

# Al School: Classes & Learning Paths

Al School: Classes & Learning Paths - Microsoft Al

#### **AI Business School**

Al Business School Artificial Intelligence Courses - Microsoft Al