

# Azure Data Scientist Learning Pathway

[www.aka.ms/pathways](http://www.aka.ms/pathways)

## Getting Started

### What is a data scientist?

A data scientist is a data expert who helps collect, analyze and interpret large amounts of data in order to solve complex business problems. They combine statistics, computer science and business acumen to help an organization understand more about itself and achieve its goals. Oftentimes this involves taking messy, unstructured data from a multitude of sources and devising methods for making sense of it, using machine learning, artificial intelligence, and statistical analysis in order to uncover trends and challenge existing assumptions.

- [Foundations of data science for machine learning](#)
- [Understand data science for machine learning](#)
- [Create machine learning models](#)
- [Microsoft Azure AI Fundamentals: AI Overview](#)
- [Microsoft Analytics Blog](#)
- [Machine learning for data scientists](#)
- [Explore machine learning through video](#)
- [Explore and configure the Azure Machine Learning workspace](#)
- [Experiment with Azure Machine Learning](#)
- [Introduction to machine learning operations \(MLOps\)](#)
- [End-to-end machine learning operations \(MLOps\) with Azure Machine Learning](#)

Copilot for Data Science

## Microsoft Learn

### Azure Machine Learning workspaces

- [What is an Azure Machine Learning workspace?](#)
- [Manage Azure Machine Learning workspaces in the portal or with the Python SDK \(v2\)](#)
- [Explore Azure Machine Learning workspace resources and assets](#)
- [Data concepts in Azure Machine Learning](#)
- [Create datastores](#)
- [Create and manage data assets](#)
- [Compute targets in Azure Machine Learning](#)

### Experiments/Models

- [What is Azure Machine Learning designer?](#)
- [Deploy a machine learning model with the designer](#)
- [Train models with Azure Machine Learning](#)
- [Enable logging in Azure Machine Learning designer pipelines](#)
- [Log metrics, parameters, and files with MLflow](#)
- [Track experiments and models with MLflow](#)
- [Run pipelines in Azure Machine Learning](#)
- [Moving data into and between ML pipeline steps \(Python\)](#)
- [Run pipelines in Azure Machine Learning](#)

### Optimise & Manage

- [Find the best classification model with Automated Machine Learning](#)
- [Set up no-code Automated ML training for tabular data with the studio UI](#)
- [Perform hyperparameter tuning with Azure Machine Learning](#)
- [Model interpretability](#)
- [Permutation Feature Importance](#)

### Optimise & Manage

- [Model performance and fairness](#)
- [Monitor Azure Machine Learning](#)
- [Monitor performance of models deployed to production](#)

### Deploy & Consume

- [What are compute targets in Azure Machine Learning?](#)
- [Enterprise security and governance for Azure Machine Learning](#)
- [Tutorial: Create production machine learning pipelines](#)
- [Install and set up the CLI \(v2\)](#)
- [Authenticate clients for online endpoints](#)
- [Tutorial: Use the designer to deploy a machine learning model](#)

### Microsoft Fabric

- [Explore data for data science with notebooks in Microsoft Fabric](#)
- [Preprocess data with Data Wrangler in Microsoft Fabric](#)
- [Implement a data science and machine learning solution for AI in Microsoft Fabric](#)

### Other

- [Implement a machine learning solution with Azure Databricks](#)
- [Train and manage a machine learning model with Azure Machine Learning](#)
- [Create machine learning models with R and tidymodels](#)

## Role based Certification

### DP-100 Azure Data Scientist

#### Skills Measured

- Design and prepare a machine learning solution
- Explore data and run experiments
- Train and deploy models
- Optimise language models for AI applications

#### Self Study:

- [Explore and configure the Azure Machine Learning workspace](#)
- [Experiment with Azure Machine Learning](#)
- [Optimize model training with Azure Machine Learning](#)
- [Manage and review models in Azure Machine Learning](#)
- [Deploy and consume models with Azure Machine Learning](#)
- [Develop generative AI apps in Azure AI Foundry portal](#)

Course Page

Exam Page

Practice Assessment

Exam Study Guide

Azure ML Documentation

Video on Demand