

Syllabus: Working with Data in Azure

Instructor

Jasmine Greenaway

Office Location

Microsoft Teams

Questions? Please submit them in advance of scheduled office hours at:

<https://aka.ms/university-azure/questions>

Course Overview

This workshop is an introduction to working with data in the cloud on Azure. You will walk through the different data structures and how they can be managed, consumed, and accessed in Azure. This workshop also explores solutions and integrations with common tools used for extract, transform, and load (ETL) processes. You will leave with an improved understanding of Azure's data ecosystem and where your existing data fits within it.

In this course, we will cover the following topics:

- Benefits of working with data in the cloud and review of terminology
- Relational data with Azure SQL and Azure MySQL Database, and more
- Files and blobs with Azure Storage
- Additional tools and services and strategies for migrating data to Azure and options for computation.

And you will complete the following hands-on exercises:

- How to transform data to another type with Azure Data Factory
- Integration with Jupyter Notebooks in Azure Machine Learning Studio

Course Materials

- On-demand course videos: <https://aka.ms/university-azure/DataOnAzure>
- Scheduled Live Office Hours with Course Instructor

Course Videos

Video Name	Video Title	Video Description	Video Time
Video 3A	Benefits Working with Data	Benefits of working with data in the cloud and terminology	8:10
Video 3B	Databases	Relational data with Azure SQL and Azure MySQL Database, and more	6:34
Video 3C	Unstructured Data	Files and blobs with Azure Storage	7:37
Video 3D	Exercise – How to Transform Data	<i>Exercise:</i> How to transform data to another type with Azure Data Factory and integration with Jupyter	18:13

		Notebooks in Azure Machine Learning Studio	
Video 3E	Tools and Integrations	Additional tools and services and strategies for migrating data to Azure and options for computation	8:34

Prerequisites

*This workshop uses Python, but knowledge of the language is **not** required.*

- Complete the “Getting Started with Azure” course by Alex Vazquez. Video series is available here: <https://aka.ms/university-azure/GettingStartedAzure>

Additional Resources

Supplemental_GitHub_Repository: <https://aka.ms/university-azure/DataIntro>

Databases

Azure SQL documentation: <https://docs.microsoft.com/azure/azure-sql/>

Azure DB for MySQL documentation: <https://docs.microsoft.com/azure/mysql/>

Azure DB for Postgres documentation: <https://docs.microsoft.com/azure/postgresql>

Non-Relational/Unstructured/Semi-Structured/NoSQL

Storage Account documentation: <https://docs.microsoft.com/enus/azure/storage/>

Cosmos DB documentation: <https://docs.microsoft.com/enus/azure/cosmosdb/>

Migration and ETL + Additional Services

Azure Data Factory documentation: <https://docs.microsoft.com/en-us/azure/data-factory/>

Azure Stream Analytics documentation: <https://docs.microsoft.com/en-us/azure/stream-analytics/>

Azure Databricks documentation overview: <https://docs.microsoft.com/en-us/azure/azure-databricks/>

MS Learn Modules

Migrate on-premises MySQL databases to Azure:

<https://docs.microsoft.com/enus/learn/modules/migrateonpremissesmysqldatabases/>

More Migration Modules (SQL Server, Postgres, Mongo/CosmosDB):

<https://docs.microsoft.com/en-us/learn/browse/?terms=migrate&roles=data-analyst%2Cdata-engineer%2Cdatabase-administrator>

Storage Accounts:

<https://docs.microsoft.com/enus/learn/browse/?term=azure%20storage>

Work with NoSQL data in Azure Cosmos DB: <https://docs.microsoft.com/en-us/learn/paths/work-with-nosql-data-in-azure-cosmos-db/>

Create production workloads on Azure Databricks with Azure Data Factory:

<https://docs.microsoft.com/en-us/learn/modules/create-production-workloads-azure-databricks-azure-data-factory/>

Course Schedule

Week	Subject
Week 1	Watch On-Demand Course Videos (on your own)
Week 2	Live Course Office Hours with Instructor