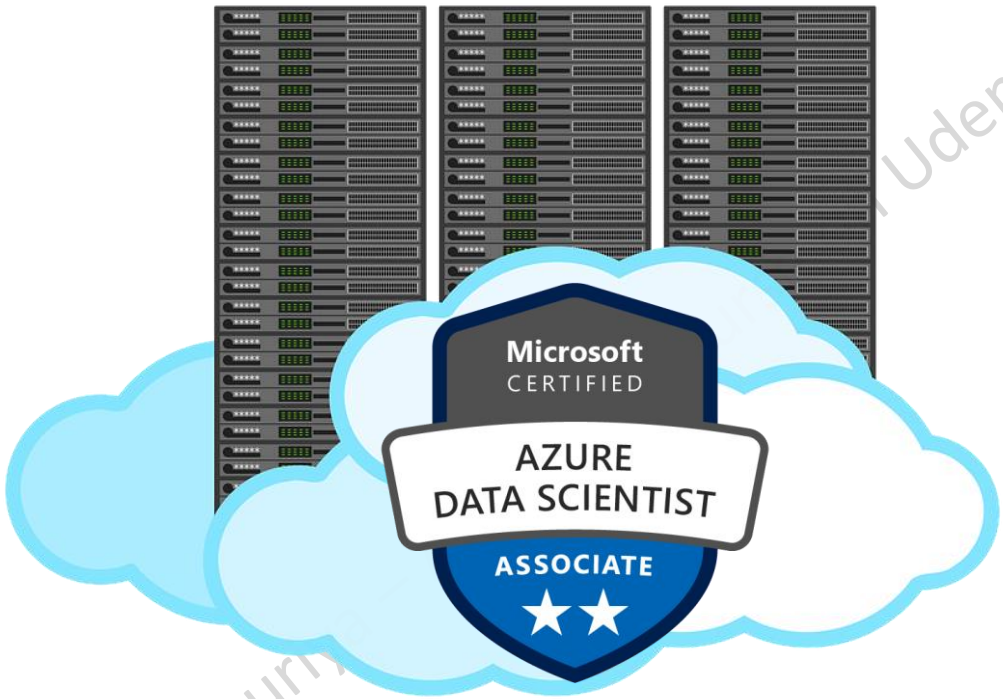

Azure Machine Learning

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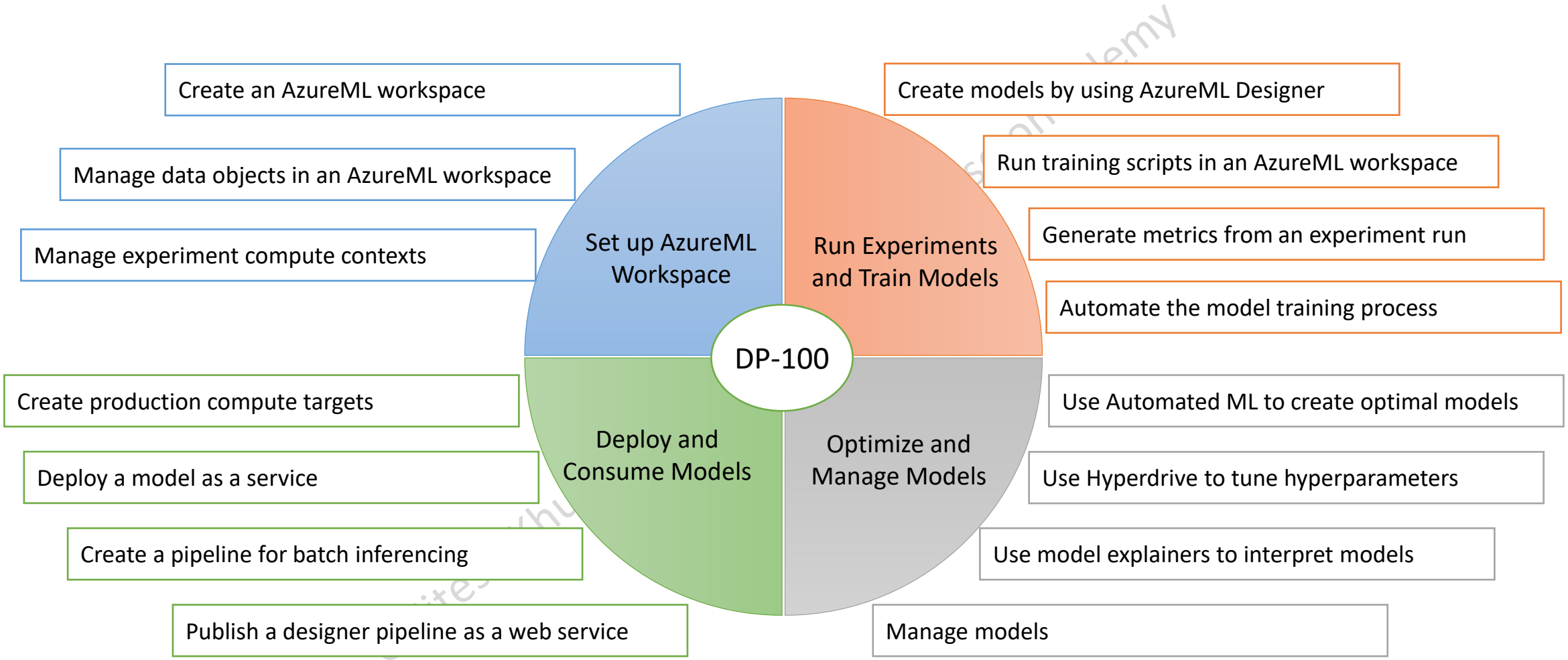

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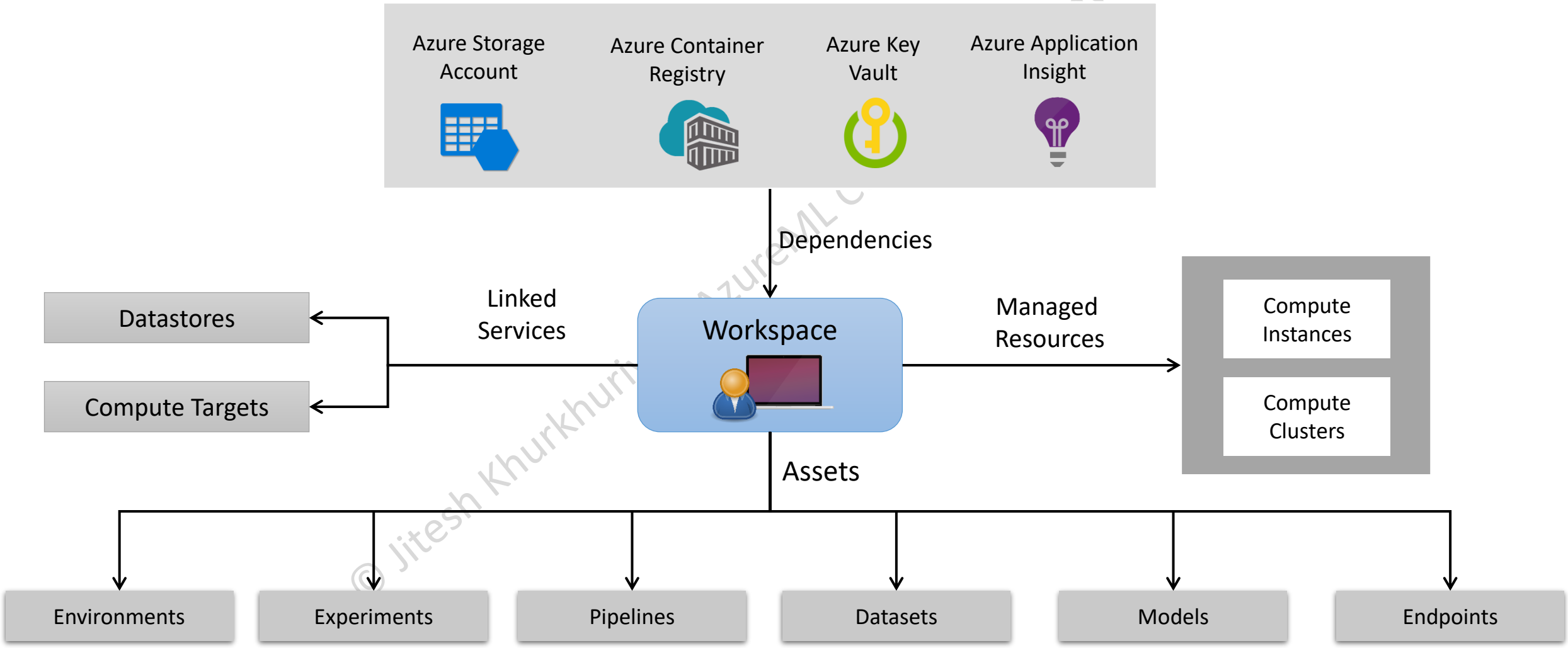
Azure Machine Learning Architecture and Concepts



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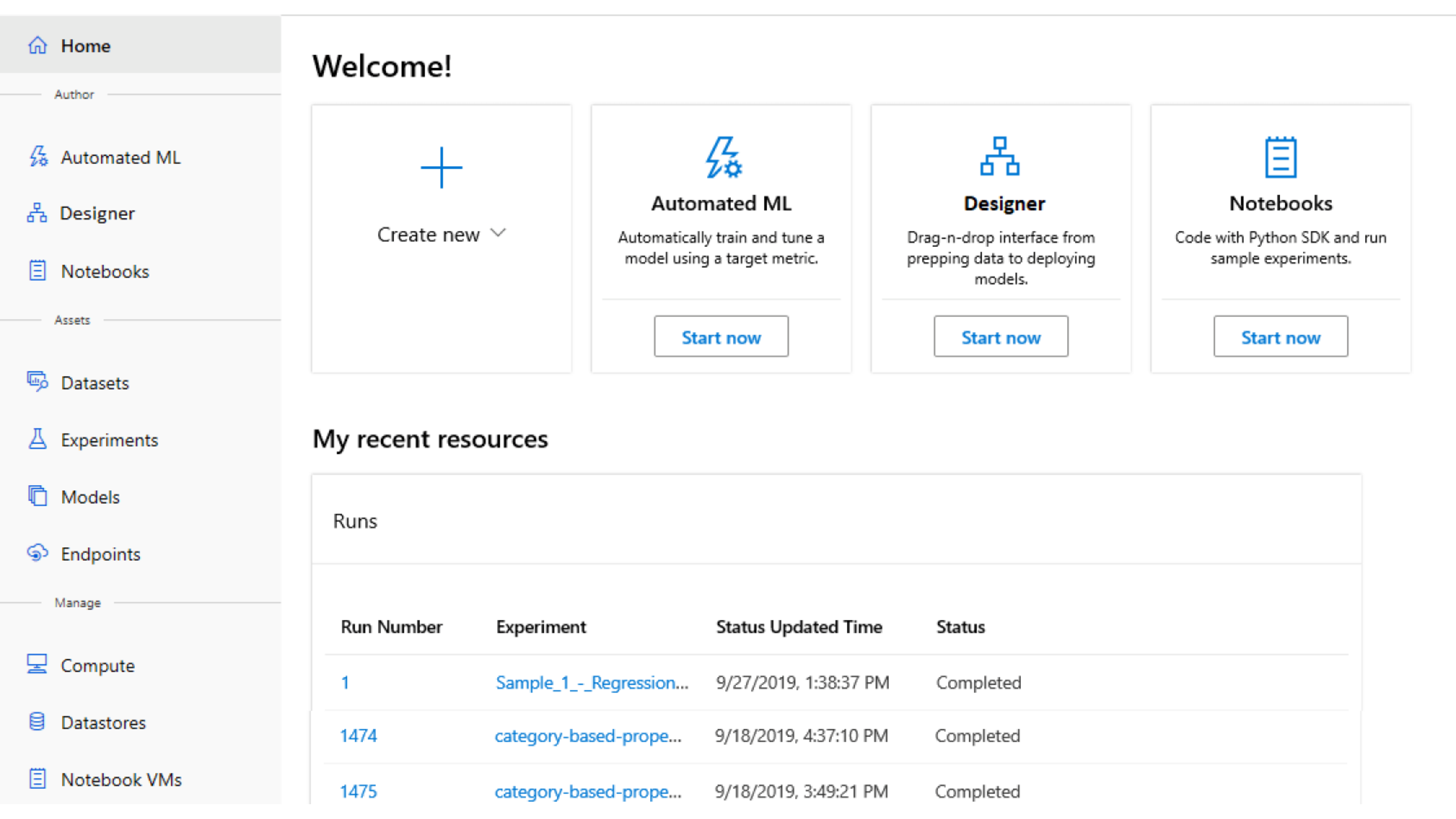
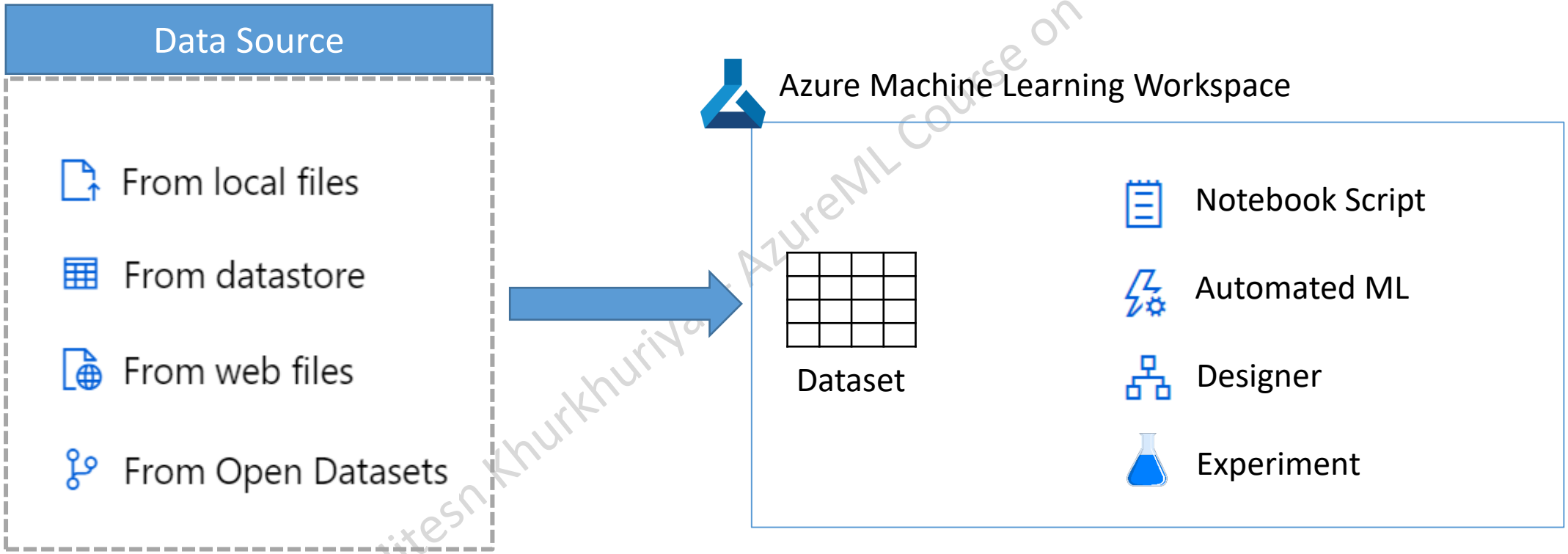

Home
Author
Automated ML
Designer
Notebooks
Assets
Datasets
Experiments
Models
Endpoints
Manage
Compute
Datastores
Notebook VMs
Welcome!
Create new
Automated ML
Automatically train and tune a model using a target metric.
Start now
Designer
Drag-n-drop interface from prepping data to deploying models.
Start now
Notebooks
Code with Python SDK and run sample experiments.
Start now
My recent resources
Runs
Run Number
Experiment
Status Updated Time
Status
1
Sample_1_-_Regression...
9/27/2019, 1:38:37 PM
Completed
1474
category-based-prope...
9/18/2019, 4:37:10 PM
Completed
1475
category-based-prope...
9/18/2019, 3:49:21 PM
Completed

What is a Dataset (AzureML Concept)?



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https://archive.ics.uci.edu/ml/machine-learning-databases/adult/adult.data

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What is a Datastore and a Dataset?

Storage

Database

Analytics

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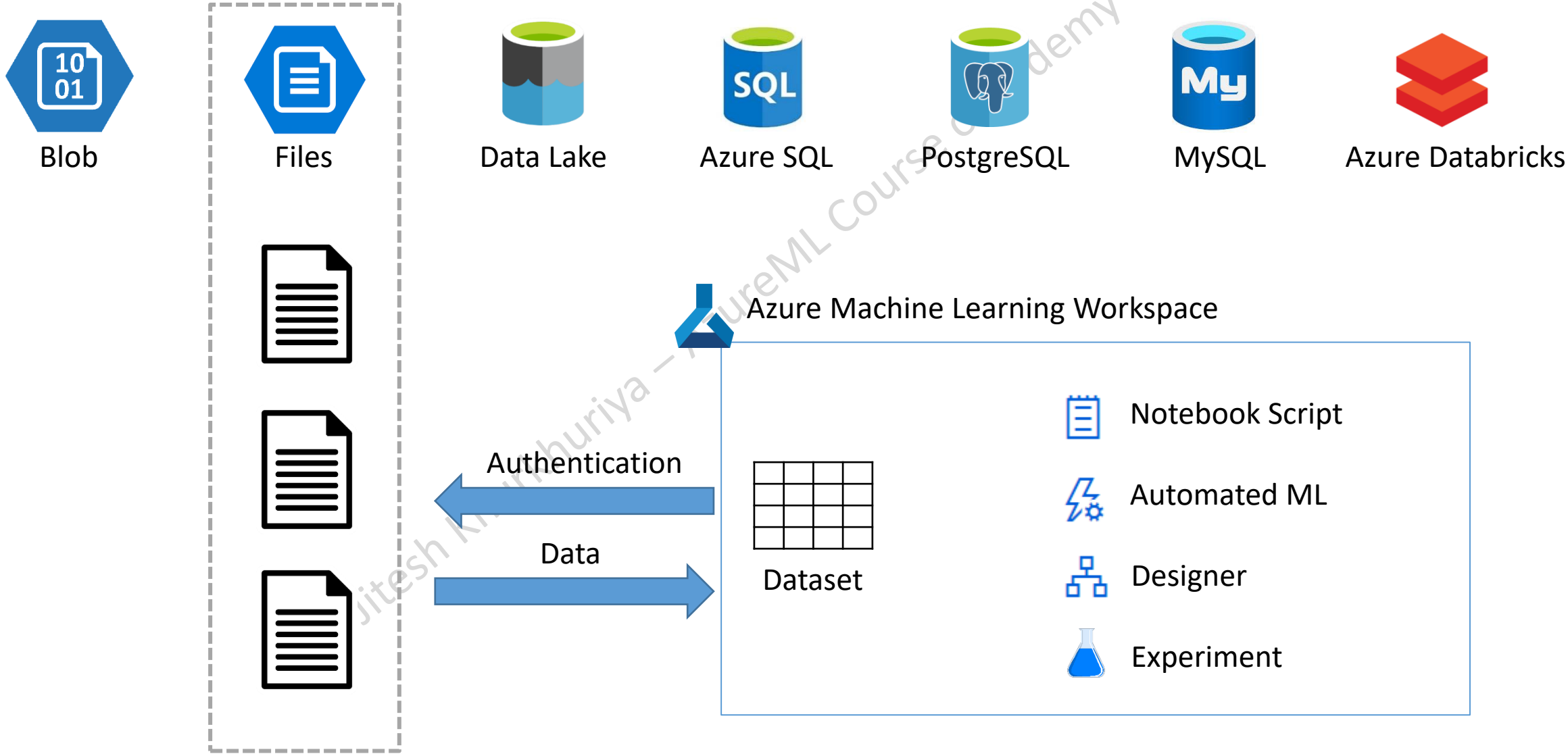
What is a Datastore and a Dataset?



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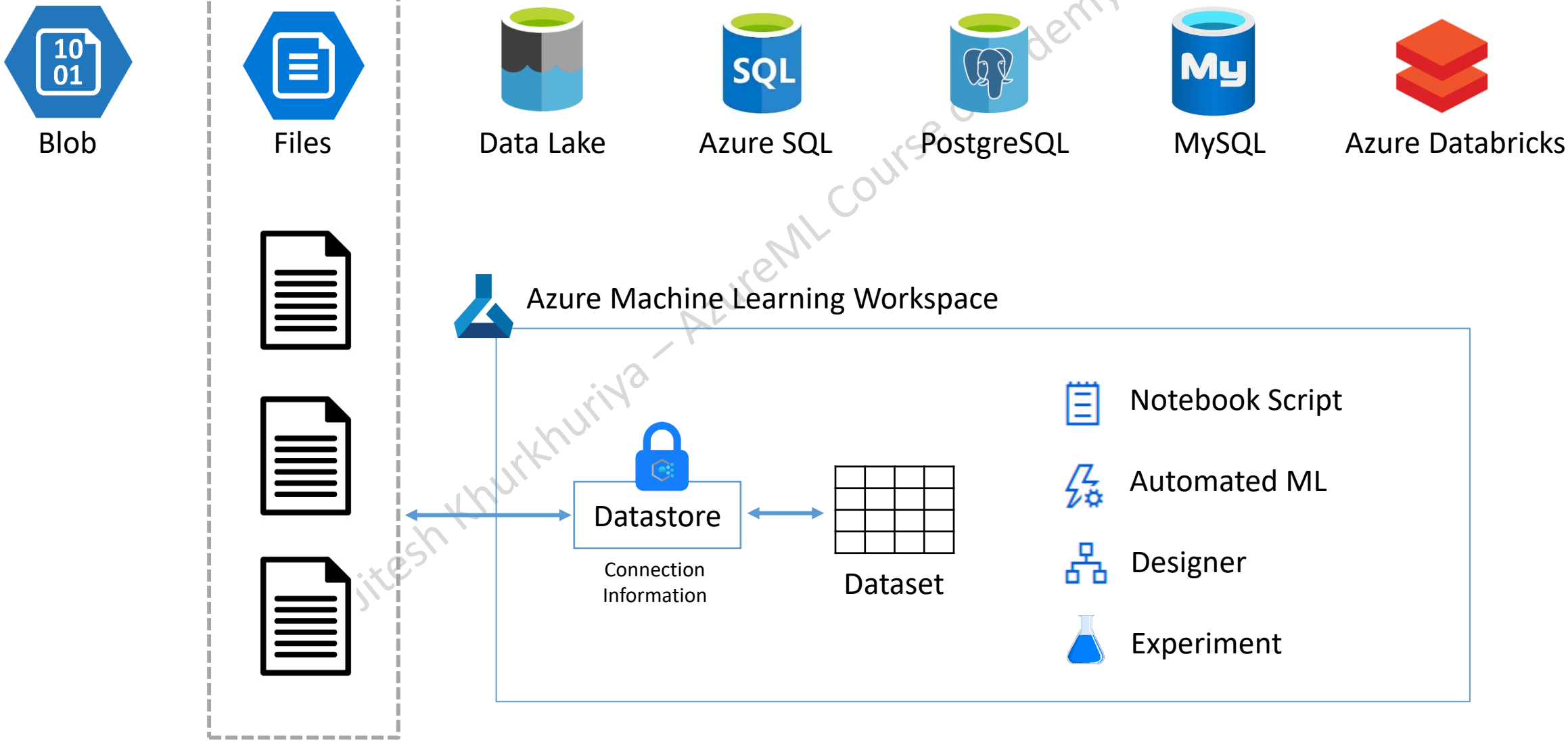
What is a Datastore and a Dataset?



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What is a Datastore and a Dataset?

Blob

Files

Data Lake

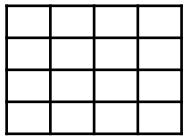
Azure SQL

PostgreSQL

MySQL

Azure Databricks

Azure Machine Learning Workspace


Dataset

Notebook Script

Automated ML

Designer

Experiment

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Understanding Compute Resources in AzureML

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Azure Storage Account

- Workstations for Data Scientists
- Integrated with AzureML Workspace
- R and PythonTools and environment
- Docker, AzureML SDK

- Development Environment
- Typically used with notebooks and data profiling/Summary
- For training and inferencing for development and testing

Datastores

Compute Targets

Linked Services

Workspace

Managed Resources

Compute Instances

Compute Clusters

Remote/Attached Compute

- Local Machines, Compute Instance, Clusters, VMs
- Used for training or test deployment
- Computer cluster for Batch inferencing

Inference Clusters

- Azure Kubernet Service running on AKS Cluster
- Highly scalable production deployment
- For real-time inferencing

- Group of VMs Single or multiple node
- Integrated with Workspace
- Can be used for All authors
- Used for training the pipeline and experiment run

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Azure Storage Account

- Workstations for Data Scientists
- Integrated with AzureML W
- R and PythonTools and en
- Docker, AzureML SDK

Notebook

- Development Environment
- used with notebooks profiling/Summary
- For training and inferencing for development and testing

Datastores

Compute Targets

Linked Services

Workspace

Managed Resources

Compute Instances

Compute Clusters

Remote/Attached Compute

Test or Batch Deploy

- Clusters, VMs
- Used for training or test deployment
- Computer cluster for Batch inferencing

Inference Clusters

Real-Time Deploy

- Cluster
- Highly scalable production deployment
- For real-time inferencing

All Authors

- node
- Integrated with Workspace
- Can be used for All authors
- Used for training the pipeline and experiment run

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What is a Pipeline?

- Automated Workflow of the Machine Learning steps starting from Data Processing till deployment

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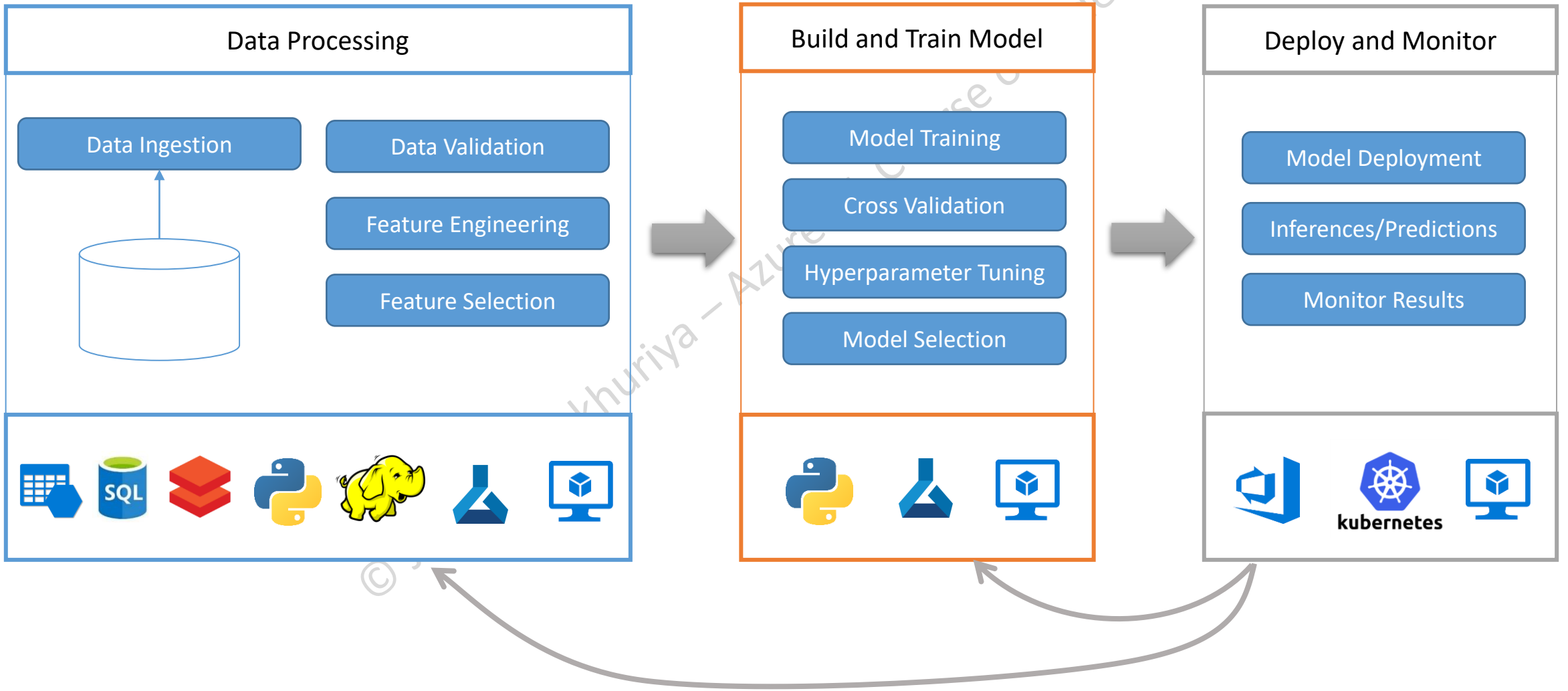
What is a Pipeline?



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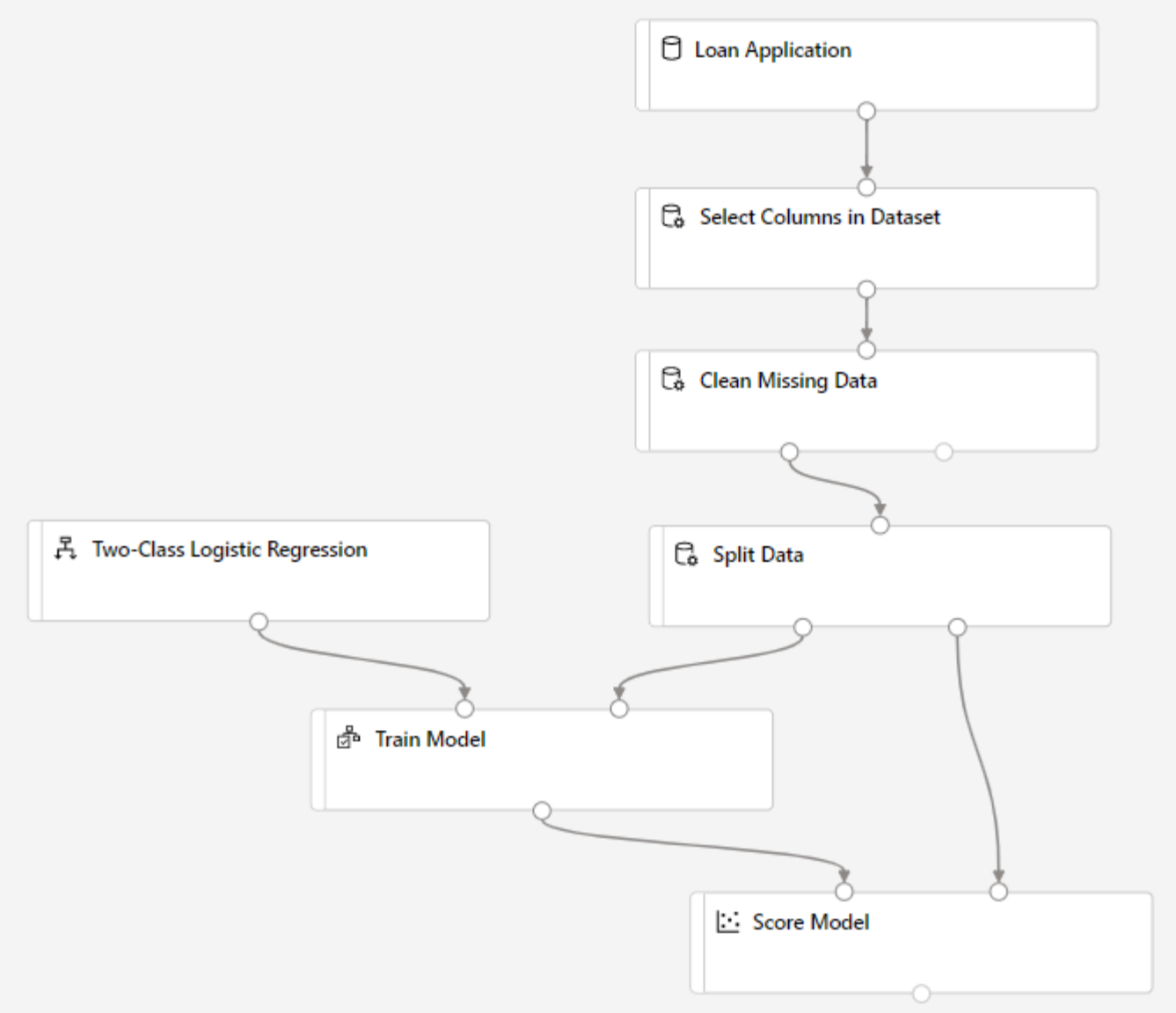
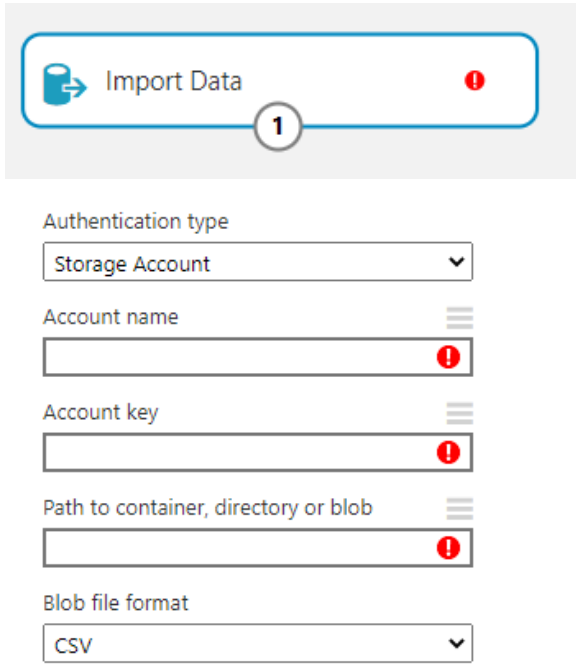


AzureML Studio Classic

- Limited options of data ingestion
- Separate connections for every dataset
- Same compute power for entire pipeline



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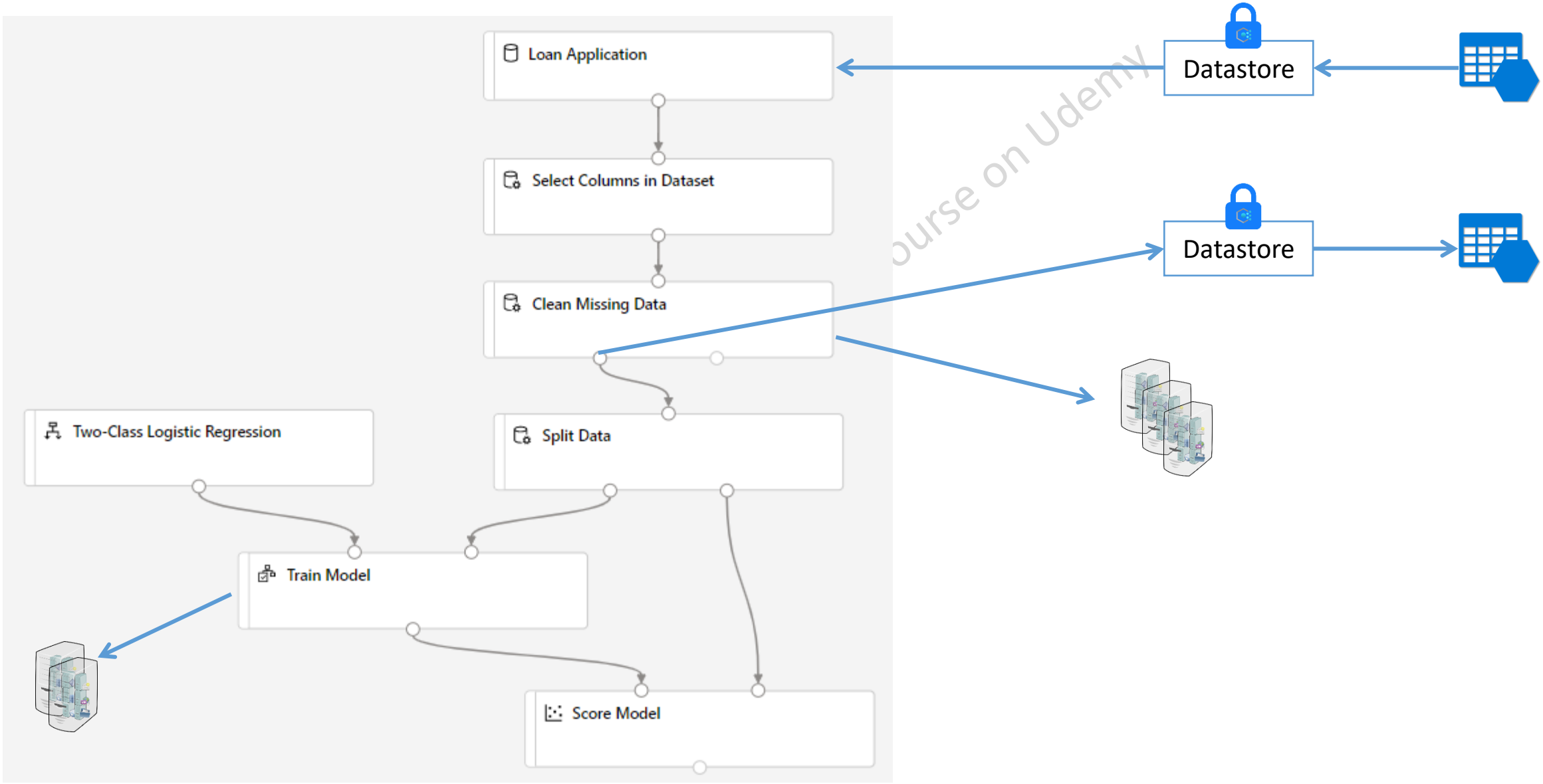

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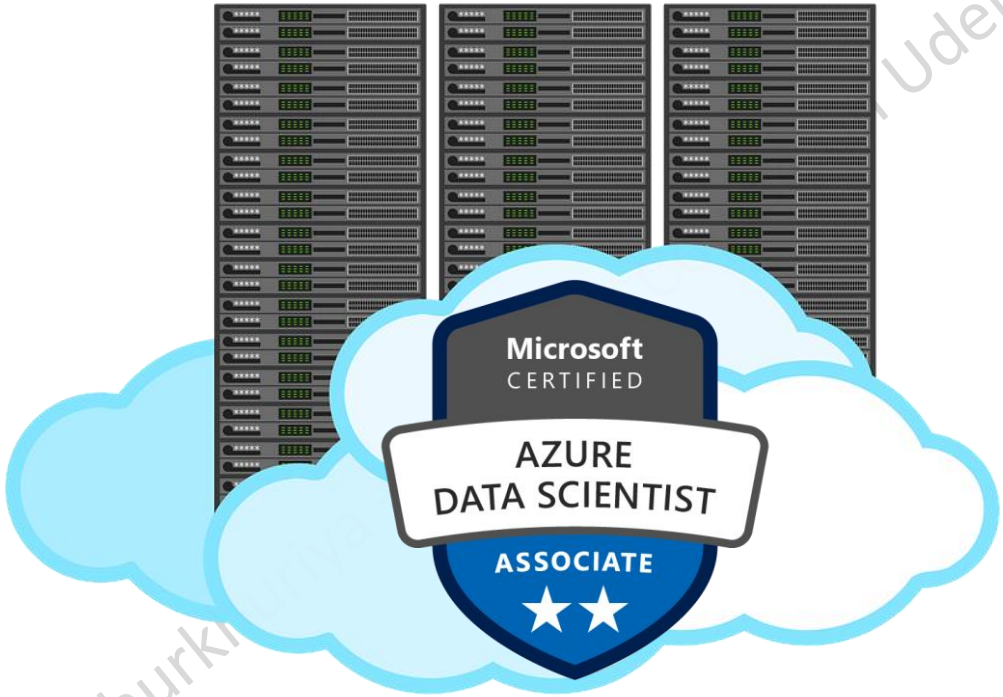
Azure Machine Learning



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