Microsoft

Module 1: Introduction to Azure Machine Learning

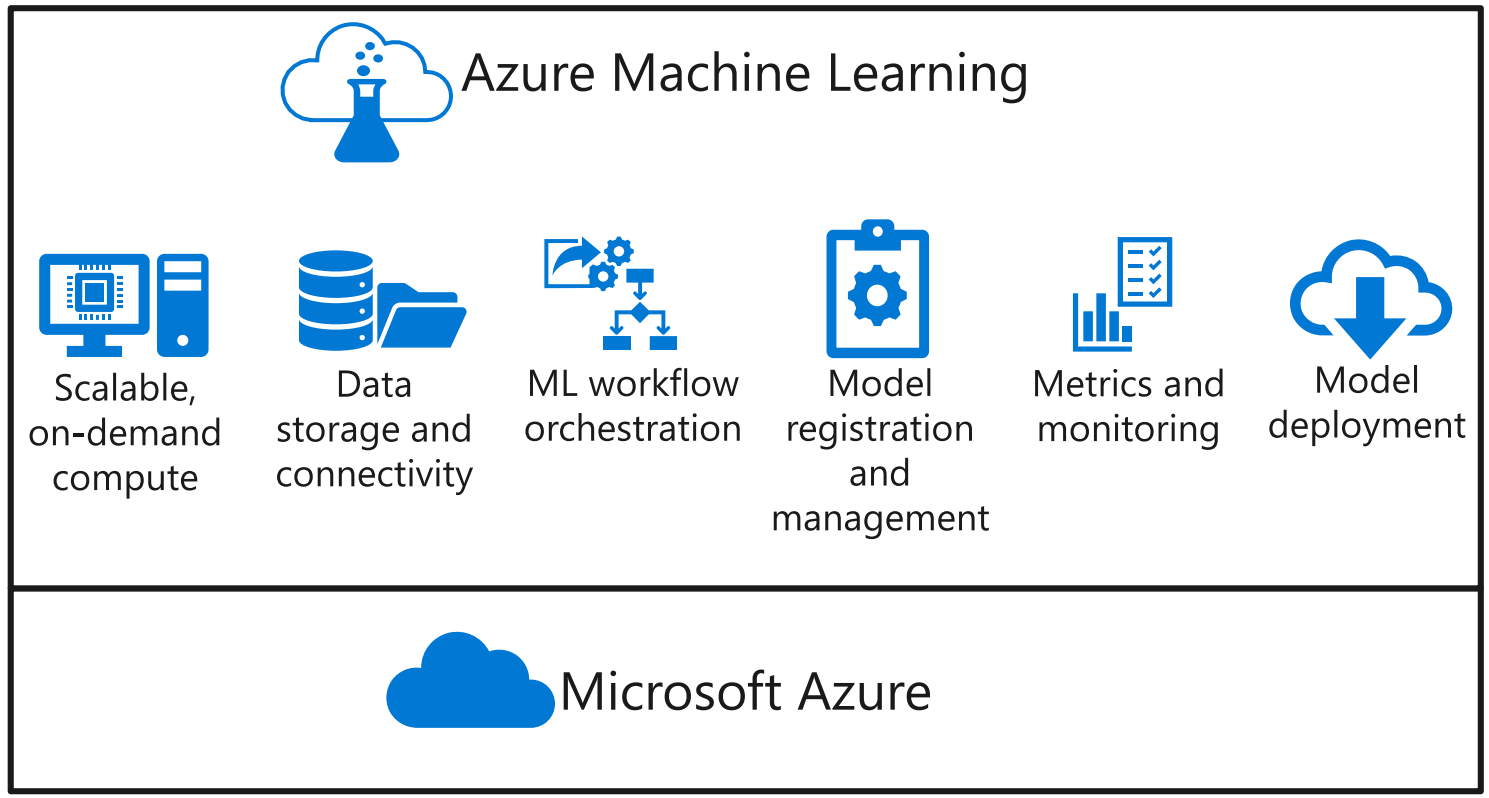
Agenda

- Getting Started with Azure Machine Learning
- Azure Machine Learning Tools

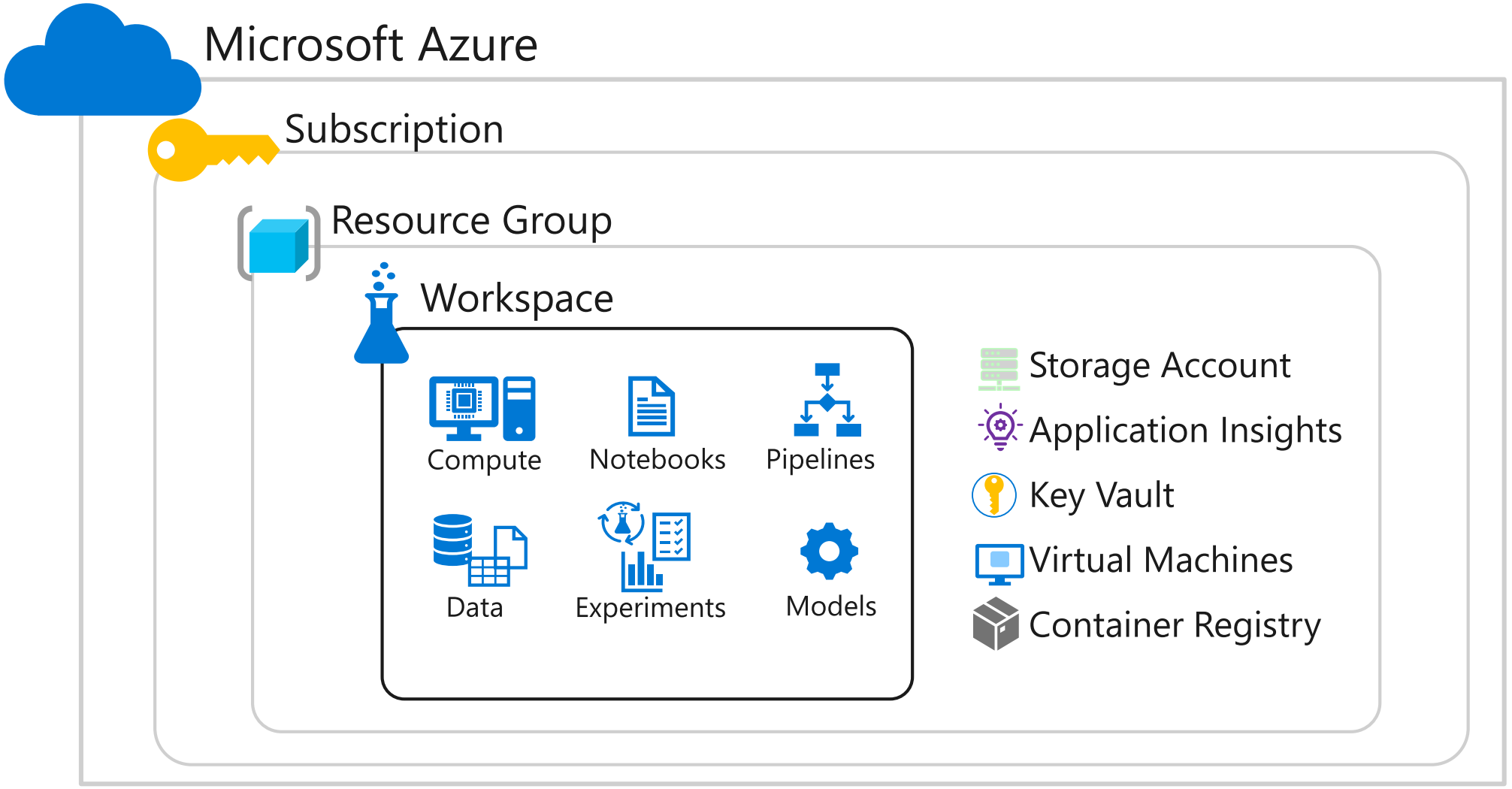
Lesson 1
Getting Started with Azure Machine Learning

What is Azure Machine Learning?

A platform for operating machine learning workloads in the cloud



Azure Machine Learning Workspaces



Considerations for Creating a Workspace

Region

Check Azure Resource availability

For example, NC-Series Virtual Machines for GPU processing

Edition

Enterprise

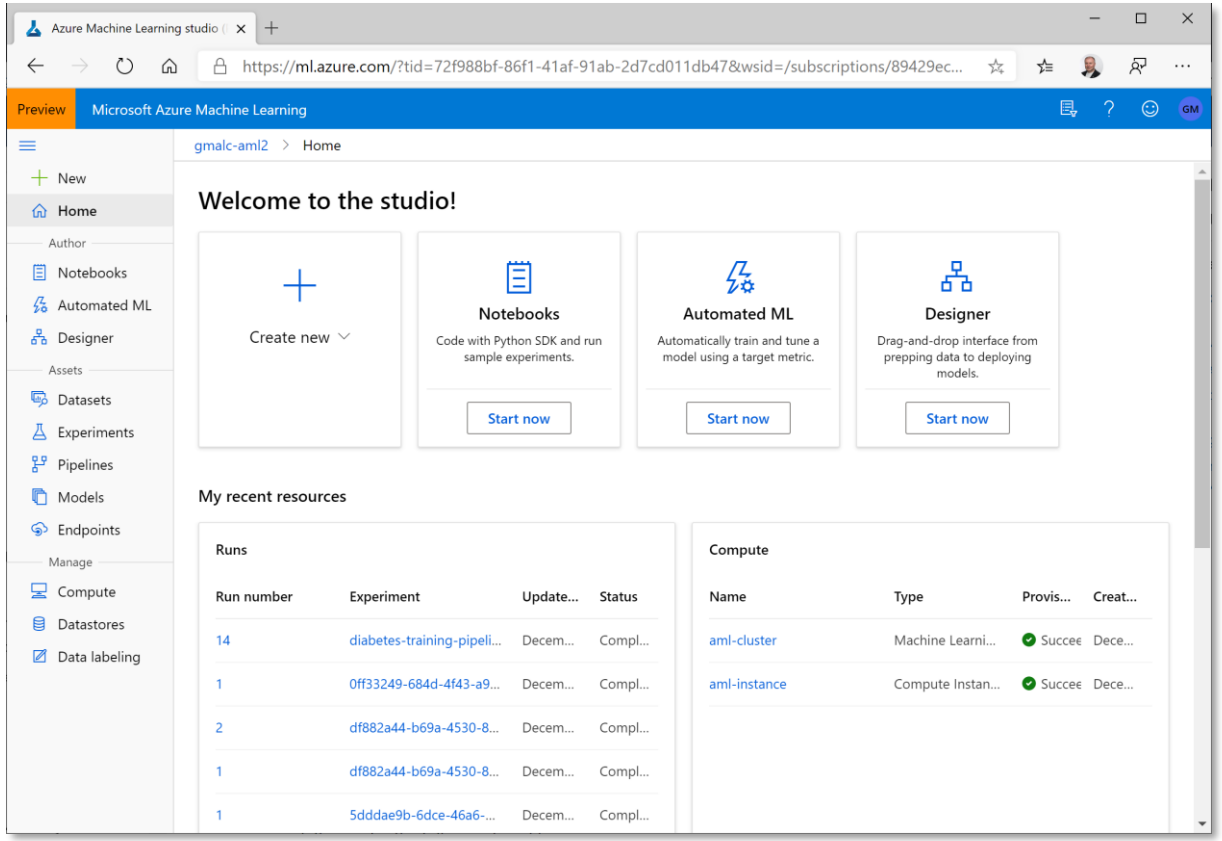
- All features

Basic

- No Visual Designer
- No Automated ML user interface
- No Data Drift user interface

Azure Machine Learning studio

- Manage compute and data
- Run experiments
- View metrics
- Manage and deploy models
- Manage endpoints
- Use graphical modeling tools:
  - *Designer* - "no-code" model development
  - *Automated Machine Learning* - find the best model for your data



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Lab 1A

Creating an Azure Machine Learning Workspace

https://aka.ms/msl-dp100

Lesson 2
Azure Machine Learning Tools

The Azure Machine Learning SDK for Python

Code-based configuration for machine learning assets:

- Automate repeatable asset creation
- Ensure consistency across development, test, and production environments
- Incorporate machine learning asset configuration into DevOps

```
pip install azureml-sdk
```

```
from azureml.core import Workspace

ws = Workspace.from_config()
for compute_name in ws.compute_targets:
    compute = ws.compute_targets[compute_name]
    print(compute.name, ":", compute.type)
```

Azure Machine Learning CLI Extension

Azure Machine Learning commands for the Azure CLI

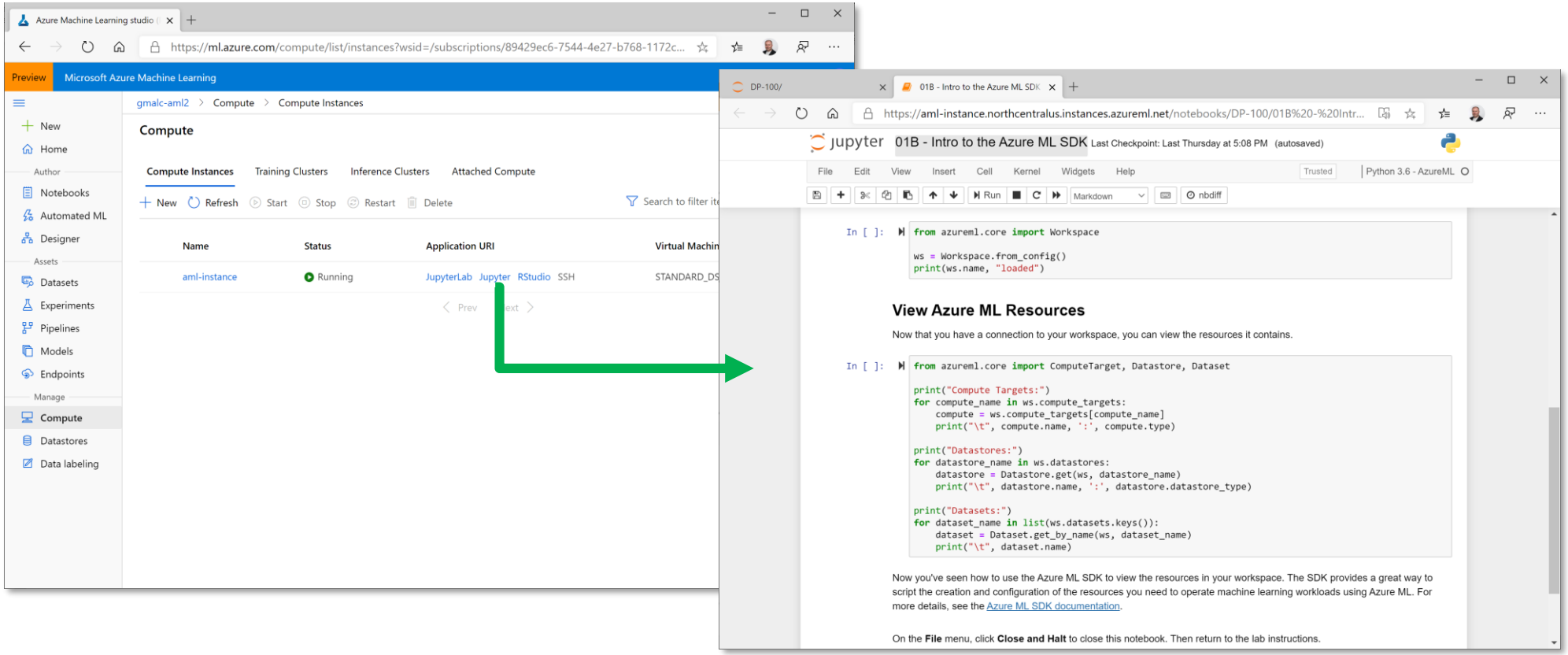
- Cross-platform command-line management of Azure Machine Learning assets

```
az extension add -n azure-cli-ml
```

```
az ml computetarget list -g 'aml-resources' -w 'aml-workspace'
```

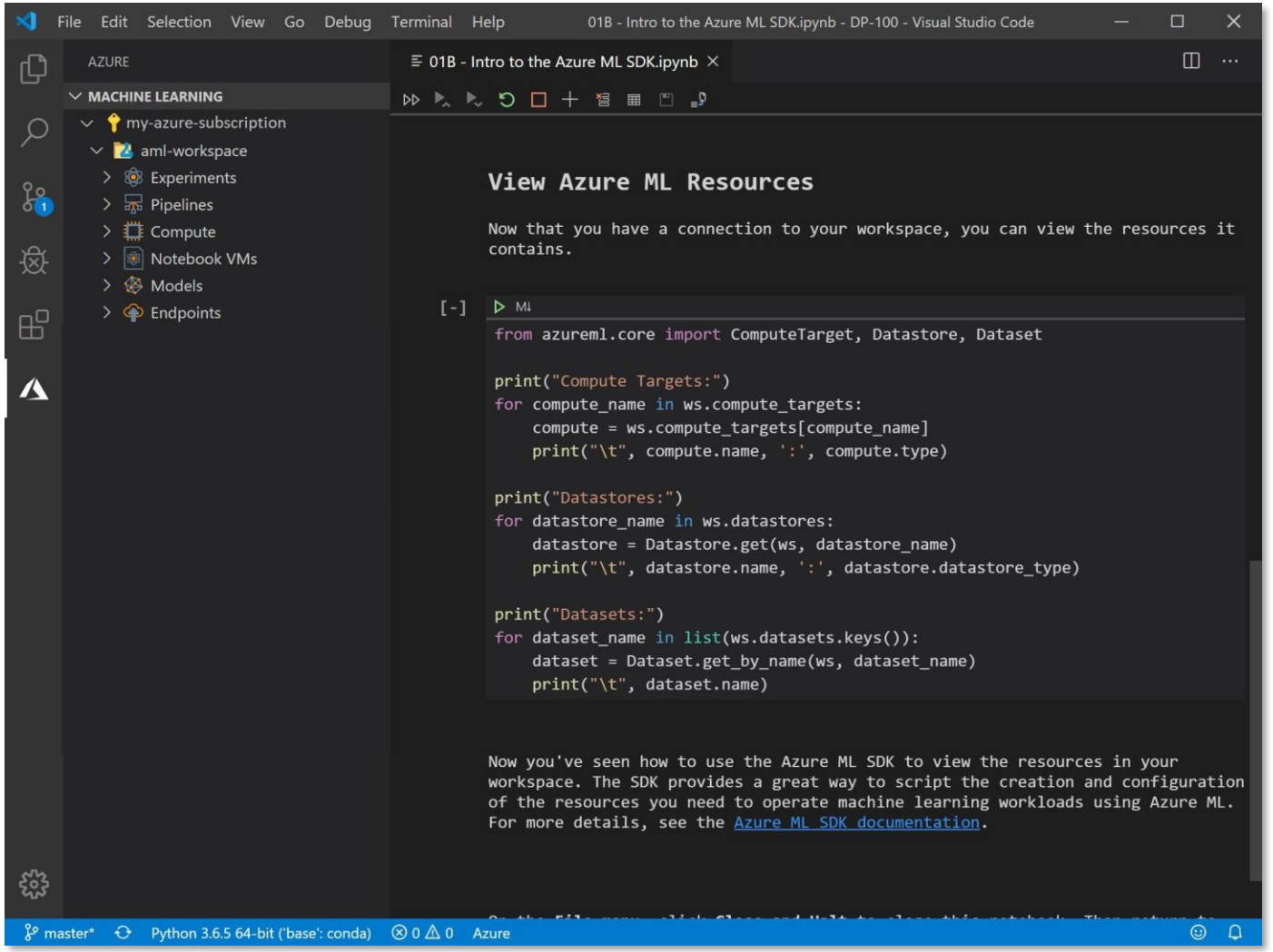
Compute Instances

- Jupyter Notebook and JupyterLab servers in your workspace
- Choose the compute specifications you need



The Azure Machine Learning Extension for VS Code

- Graphical Interface for working with Azure Machine Learning
- When combined with the Python extension, a complete development environment for Azure Machine Learning



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Lab 1B

Working with Azure Machine Learning Tools

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