Getting Started with Azure Machine Learning

Before You Start

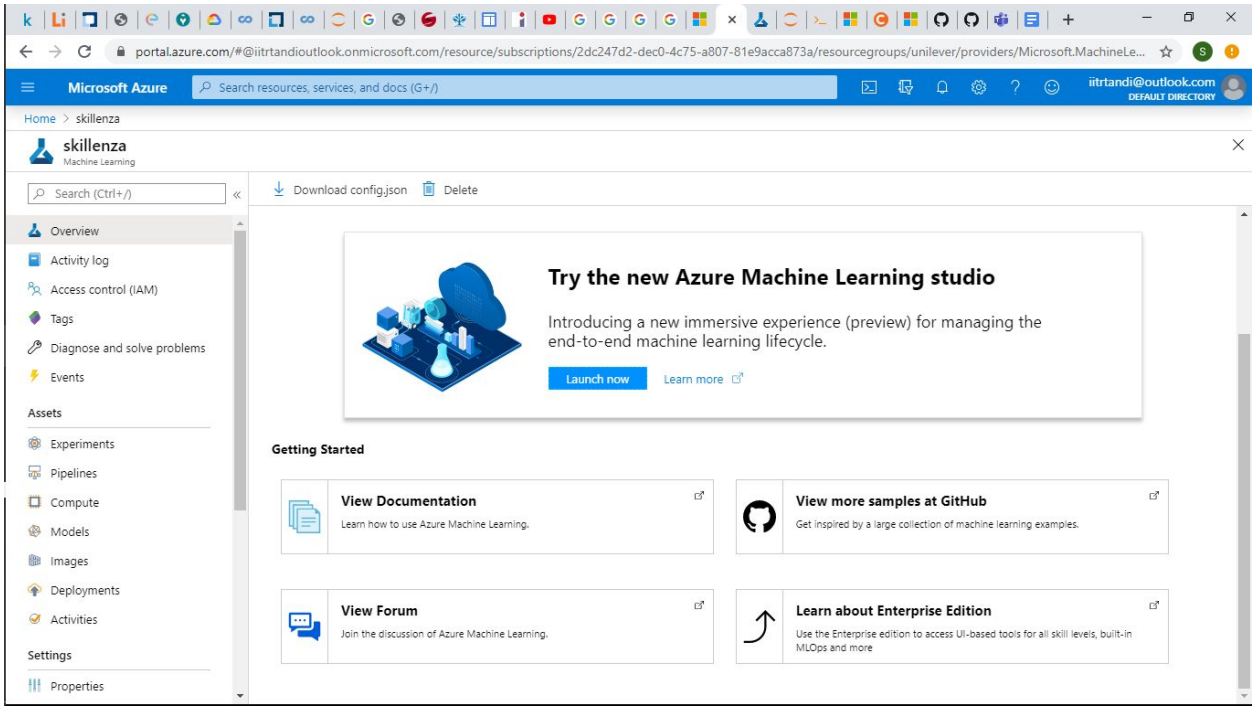
Azure Machine Learning (Azure ML) is a Microsoft Azure-based service for running data science and machine learning workloads at scale in the cloud. To use Azure Machine Learning, you will need an Azure subscription. If you do not already have one, you can sign up for a free trial at https://azure.microsoft.com.

Create an Azure Machine Learning Workspace

Sign into the Azure portal and create a new resource - search for "machine learning" and select Machine Learning. Specify a unique workspace name, create a new resource group in the region nearest to your location, and select the Enterprise workspace edition.

When the workspace and its associated resources have been created, view the workspace in the portal. You can manage workspace assets in the Azure portal, but for data scientists, this tool contains lots of irrelevant information and links that relate to managing general Azure resources. An alternative, Azure ML-specific web interface for managing workspaces is available.

In the Azure portal blade for your Azure Machine Learning workspace, click the link to launch Azure Machine Learning studio; or alternatively, in a new browser tab, open https://ml.azure.com. If prompted, sign in using the Microsoft account associated with your Azure subscription and select your Azure subscription and workspace.



Create a Compute Instance

You can perform many machine learning tasks in the *Studio* interface, but it's also important to be able to script configuration tasks and data experiments to make them easier to repeat and automate. *Compute Instances* provide a virtual machine that you can use as a hosted development workstation to do this.

1. In the Azure Machine Learning studio web interface for your workspace, view the Compute page. This is where you'll manage all the compute targets for your data science activities.
2. On the Compute Instances tab, add a new compute instance, giving it a unique name and using the STANDARD_DS3_V2 VM type template. You'll use this VM as a development environment.
3. If necessary, click Refresh periodically until the compute instance you created has started. Then click its Jupyter link to open Jupyter Notebooks on the VM.
4. In the notebook environment, on the New menu, click Terminal. This will open a new tab with a command shell.
5. The Azure Machine Learning SDK is already installed in the compute instance image, but it's worth ensuring you have the latest version, with the optional packages you'll need in this lab; so enter the following command to update the

SDK packages:

```
pip install --upgrade azureml-sdk[notebooks,automl,explain]
```

More Information: For more details about installing the Azure ML SDK and its optional components, see the Azure ML SDK Documentation.

Next, run the following commands to change the current directory to the Users directory, and retrieve the notebooks you will use in this lab:

```
cd Users
```

6. `git clone https://github.com/microsoftdocs/mslearn-aml-labs`
7. After the command has completed, close the terminal tab and view the home page in your Jupyter notebook file explorer. Then open the Users folder - it should contain an mslearn-aml-labs folder, containing the files you will use in the rest of this lab.