Lab: Azure Machine Learning Resource

Objective

1. Create an Azure ML Resource
2. Create a compute cluster.

Note:

1. All the steps are to be done within Azure Portal.
2. Login into Azure Portal
    a. Go to https://portal.azure.com
    b. Login with the supplied credentials (username).
        i. Each group has a unique integer for their login [1-5] eg. **usergroup[1-5]**
        ii. **Username: Usergroup[1-5]@makecloudwork.com**
        iii. **Password: Will be supplied in the class**
    c. You will then see the landing Azure homepage. Dismiss any popups/message boxes

Section 1: Create an Azure Machine Learning

Steps

1. Login into Azure Portal
2. Type **"Machine Learning"** on the search bar. Select **"Machine Learning"** from the drop down list.
3. Click on **"+ Create"**
4. **Basics Tab**
    a. Resource group: Select from the drop down.
    b. Give name to Workspace name as "**bcbsworkspace"+"group number"** add your group number as suffix e.g. if your group number is 4, name the resource as **"bcbsworkspace4"**
    c. Region: Choose **"East US"**
    d. Storage account/Key vault/Application Insights: They get filled automatically. Accept the defaults.
    e. Container registry: Select **"None"**
    f. Click on **"Next : Networking"**
5. **Networking Tab**
    a. Leave the defaults and click on **"Next: Advanced".**
6. **Advanced Tab**
    a. Leave all the defaults and click on **"Review + create"**
7. **Review+Create Tab**
    a. Let the validation run and pass.
    b. Click on **"Create"** and wait for the deployment to complete

c. Click on **"Go to resource"**. This will take you to the overview page of the newly created Machine Learning resource

Section 2: Create a Compute cluster

Steps

1. Click on **"Launch Studio".** A separate window tab will open Azure Machine Learning Studio. Dismiss any pop-ups.
2. On the left menu, go to Manage->Compute.
3. Select **"Compute clusters"**, click on **"+ New"**
4. **Required Settings**
    a. Location: **"East US"**
    b. Virtual Machine tier: Select **"Low Priority"**
    c. Virtual Machine type: Select **"CPU"**
    d. Virtual Machine size: Select **"Select from all options"** and pick the first option **"Standard_D1"** from the list.
    e. Click on **"Next"**
5. **Advanced Settings**
    a. Compute name: **"bcbscompute"+"group number"**
    b. Accept the defaults and click on **"Create"**
    c. Wait for the compute instance to complete and the State as **"Succeeded"**

Section 3: Run a regression sample experiment.

Steps

1. We are still in **"Machine Learning Studio".**
2. On the left menu, go to Author->Designer.
3. Select **"Regression - Automobile Price Prediction (Basic)"** from the samples presented on the right side.
4. You will see a workflow pipeline with different tasks. In Settings on the right side, select **"Compute cluster"** from "**Select compute type"** and select the cluster that you have created in the last section from the drop-down menu
5. Click on **"Submit".**
6. The workflow will start running and you will see the tasks changing from **"Queued"** to **"Running"** to finally **"Completed".** The entire pipeline execution will take around 10-15 mins.

Review: We will review the scored model and evaluate model results jointly.

End of Lab.