**Assessments for Level2B AI-ML program**

**1.** Create a model using random forest classification technique and predict biological flower species using the famous iris flowers dataset (categories/classes - 3)

Dataset: iris flowers dataset  
https://archive.ics.uci.edu/ml/machine-learning-databases/iris/iris.data

Model: classification

Algorithm: random forest classification

Language: python

**2.** Using a simple retail transaction dataset, mine the data given using frequent item set mining and association rules using apriori algorithm

Dataset: retail transaction dataset

Model: association rule mining

Algorithm: apriori algorithm

Language: python

**3.** Using a simple retail transaction dataset, mine the data given using frequent item set mining and association rules using ECLAT or FP growth algorithm

Dataset: retail transaction dataset

Model: association rule mining

Algorithm: ECLAT and FP growth algorithm

Language: python

**4.** Create a recommendation system with item-item based collaborative filtering using any online retail store product dataset for past 6 months in python

Dataset: online retail transaction dataset

Model: recommendation

Algorithm: item-item based collaborative filtering

Language: python

**5.** Using the sequence of time series of data of US stock market, predict the trends of both dow-jones and NASDAQ in the year 2020 and 2021 September based on the data provided for the past 15 years.

Dataset: Prediction of trends for dow-jones and NASDAQ dataset

Model: time series analysis

Algorithm: Auto Regressive Moving Average or Auto Regressive Integrated Moving Average

Language: python

6. Use Google’s page rank algorithm to do ranking of the available web link datasets - on the internet

Dataset: http://langvillea.people.cofc.edu/PRDataCode/index.html

Model: ranking

Algorithm: Page Rank algorithm

Language: python

**7.** Given the customer data from transactions that occurred during the time period 2010 to 2011, create a model to do customer or segmentation using k-means

Dataset: https://archive.ics.uci.edu/ml/machine-learning-databases/00352/

Model: clustering

Algorithm: k-means

Language: python