Lab#5 – ML.NET

**Due Date:** Midnight of August 09 (Friday)

**Purpose:** The purpose of this assignment is to help you:

1. Understand the ML.NET pipeline
2. Identify the type of problems that can be solved with ML.NET

**Instructions**: Be sure to read the following general instructions carefully:

This assignment should be completed individually by all the students. You are encouraged to demonstrate your solution, and submit your solution **through the dropbox**. You must name your submission according to the following rule: **studentID(yourlastname)\_Labnumber.zip**. e.g., 300123456(**smith)\_Lab#5**.zip

**Rubric**

|  |  |  |
| --- | --- | --- |
|  | Functionality | Marks |
| **Q1** | 1.1 Generate cost prediction regression model | 3 |
|  | 1.2 Consume the generated model | 2 |
|  |  |  |
| **Q2** | 2.1 Student class and ClusterPrediction class | 1 |
|  | 2.2 Customize options for K-Means | 1 |
|  | 2.3 Create the pipeline | 1 |
|  | 2.4 Instantiate an instance of Student class | 1 |
|  | 2.5 Create the prediction engine from the model and perform the prediction | 1 |

**Question 2 [5 marks]**

Implement C# application to predict the medical cost by using ML.NET based on the dataset insurance.csv

**Question 3 [5 marks]**

Implement C# application to predict student’s knowledge level by using ML.NET based on the dataset Student.csv and readme.txt

[**Hint**] you can do it by mimicking the tutorial at https://docs.microsoft.com/en-us/dotnet/machine-learning/tutorials/iris-clustering