**EENG 860-Assignment1-G5**

**Due date: February 17, 2023**

Consider the attached wine dataset from the UCI machine learning repository:

https://archive.ics.uci.edu/ml/datasets/Wine. The data are the results of a chemical analysis of wines grown in the same region in Italy but derived from three different cultivars. The analysis determined the quantities of 13 constituents found in each of the three types of wines.

All attributes are continuous. NOTE: 1st attribute is class identifier (1-3).

Use 70% of the data in each class for training a Naive Bayes classifier and the remaining 30% to test the classifier performance based on given 13 attributes as:

1) Alcohol  
2) Malic acid  
3) Ash  
4) Alcalinity of ash  
5) Magnesium  
6) Total phenols  
7) Flavanoids  
8) Nonflavanoid phenols  
9) Proanthocyanins  
10)Color intensity  
11)Hue  
12)OD280/OD315 of diluted wines  
13)Proline

Provide the confusion matrix, sensitivity, specificity, total accuracy, F1-score, Roc curve, and area under curve.