

Machine Learning for Data Science Spring 2022

ASSIGNMENT 2

You can do this alone or in a group of two people.

PROBLEM

In this assignment you need to implement the Naïve Bayes Classifier. The classifier should work on any data set. You will run this classifier for the Play Golf data set. The data set will be given separately.

Data Set: The data set has 2 classes, 4 features and 13 samples. In desperate situation, a classifier that works on specific type of data sets i.e. ones with 2 classes and 4 features, will also be accepted.

Report: Submit a report that **specifically** has the following details.

1. Using all 13 samples, decide whether or not you will play golf if the sample vector is [Sunny, Mild, High, TRUE]. That is, what is the class label for this sample?
2. Using first 10 samples, predict the Yes or No label for the samples 11, 12 and 13. Write your results in the form of a table. Comment on the performance of NB classifier. What would be the class label for the sample given in 1. Does the class label change?

Sample	Actual Label	Predicted/estimated Label
11		
12		
13		
[Sunny, Mild, High, TRUE].	NO	

3. Using first 11 samples, predict the Yes or No label for the samples 12 and 13. Write your results in the form of a table. Comment on the performance of NB classifier. What would be the class label for the sample given in 1. Does the class label change?

Sample	Actual Label	Predicted/estimated Label
12		
13		
[Sunny, Mild, High, TRUE].	NO	