Machine Learning for Data Science Spring 2022 ASSIGNMENT 2

Group: 21L-7289, 21L-7285

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?*

   ANS: Label = **YES (when took all 13 samples)**

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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?*

   ANS:

Sample	Actual Label	Predicted/estimated Label (when took first 10 sample)
11	YES	YES
12	YES	YES
13	YES	YES
[Sunny, Mild, High, TRUE].	NO	YES

   When 1st ten samples were used Naïve-Bayes model predicted the actual result for 11, 12, and 13 samples, but gave a wrong prediction when another sample was tested.

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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?*

   ANS:

Sample	Actual Label	Predicted/estimated Label (when took first 11 sample)
12	YES	YES
13	YES	YES
[Sunny, Mild, High, TRUE].	NO	NO

   When 1st eleven samples were used Naïve-Bayes model predicted the actual result for 12 and 13 samples, and predicted the actual result for give set of sample when another sample was tested.

Source Code for Naïve Bayes is implemented and shared on GitHub Repo Click on link below:
[NAIVE BAYES SOURCE CODE REPOSITORY](#)