Assignments on Machine Learning (Part 3)

1. Check the codes for PCA given in the following GitHub link:

https://github.com/Sabyasachi123276/ML-using-Python/blob/main/PCA.ipynb

At first, load the dataset Wine.csv. Check the external dataset loading step shown in the code.

Let us make the following change:

In the 'train_test_split' section, let us make 'test size = 0.3'.

Let us know your observations on accuracy.

Dataset Description:

The data are the results of a chemical analysis of wines grown in the same region in Italy by three different cultivators. There are thirteen different measurements taken for different constituents found in the three types of wine. The target column 14 (Python index value 13) denotes the customer segment-wise variety of wine the chemical analysis was performed on.

2. Check the codes for Hierarchical Clustering given in the following GitHub link: https://github.com/Sabyasachi123276/ML-using-Python/blob/main/Hierarchical_Clustering.ipynb

Let us make the following changes to the code:

x = [3, 6, 11, 5, 4, 12, 13, 7, 9, 14]

y = [20, 18, 22, 16, 15, 26, 27, 17, 19, 28]

After executing the entire code with the required changes, what do you observe in the dendrogram?