Python ML Classification project

Red Wine quality prediction

SVM

Project Description:

In this particular project, we are using a dataset that contains information like quality category, citric acid quantity, chlorides density etc and using it to predict red wine quality.

However, before you go ahead and make a prediction, it is advised that you first pre-process the data, since it may contain some irregularities and noise.

In addition, try various tricks and techniques in order to gain the best accuracy in your predictions.

Part-1: Data Exploration and Pre-processing

1) load the given dataset
2) print the information from dataset
3) describe the dataset
4) print the column names from dataset
5) display the barchart of Quality_Category value counts
6) Display scatter plot between volatileacidity & citricacid
7) Display scatter plot between residualsuger & chlorides
8) Display scatterplot between sulphates and alcohol
9) Display histplot of dataset
10) find the null values
11) create features and target data

Part-2: Working with Models

1) split into training and testing
2) apply support vector machine
3) show training score
4) show the testing score
5) show the accuracy
6) create a new model and try it with parameter c = 100
7) repeat step 3,4 and 5