Practical Examination

Download the dataset grapes_new.csv from https://mitu.co.in/dataset and perform the following operations.

1. Load the dataset
2. Separate the input and output variables
3. Apply the data cleaning (if necessary)
4. Explore the output variable through countplot, pie chart
5. Explore the shape and soil type through countplot, pie chart
6. Explore alchohol_per, temperature, avg_humidity, fert_nitro_per, water_ph using kdeplot
7. Apply the data encoding (if necessary)
8. Implement the feature selection method chi^2 and find top 5 features.
9. Apply feature scaling technique and transform
10. Perform the cross validation with split ratio 80:20 and stratification
11. Implement all classification algorithm to check the accuracy on the data.
12. Create the dataframe which shows the comparison of accuracy and speed of different classification algorithm implemented on this dataset.