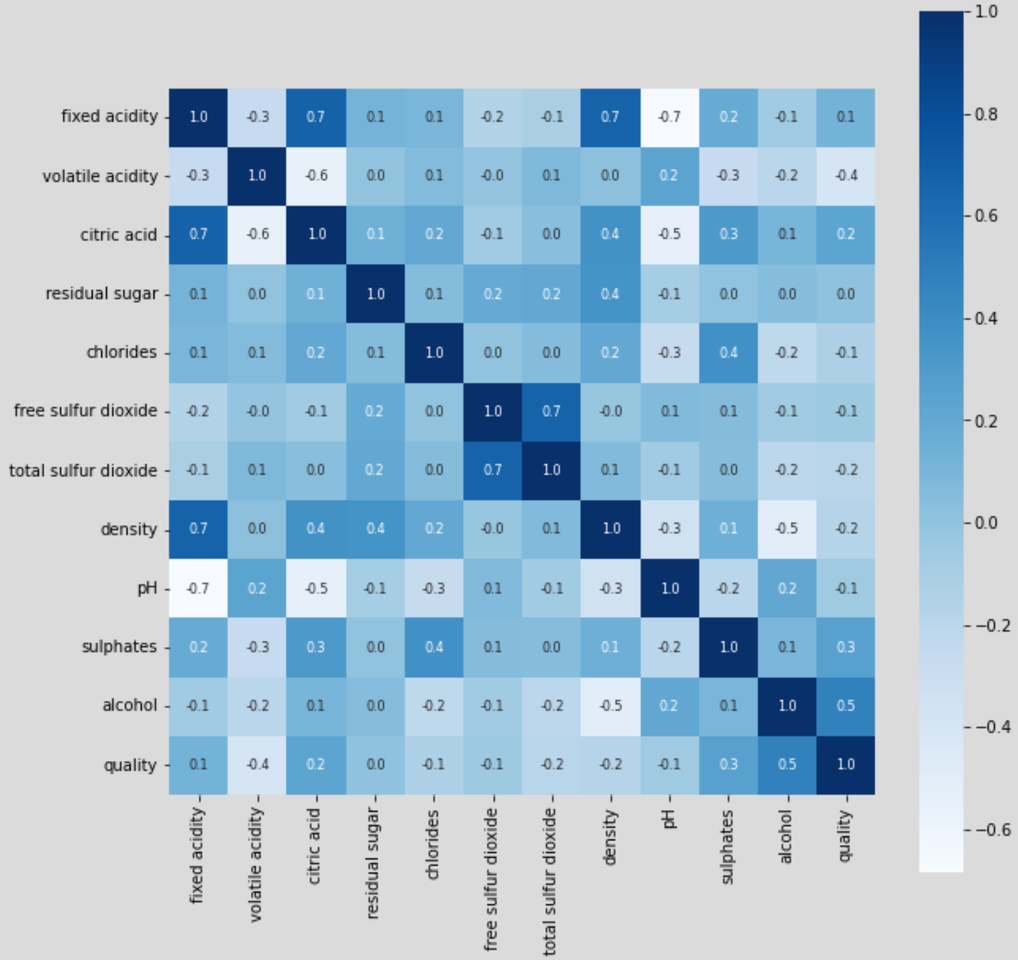
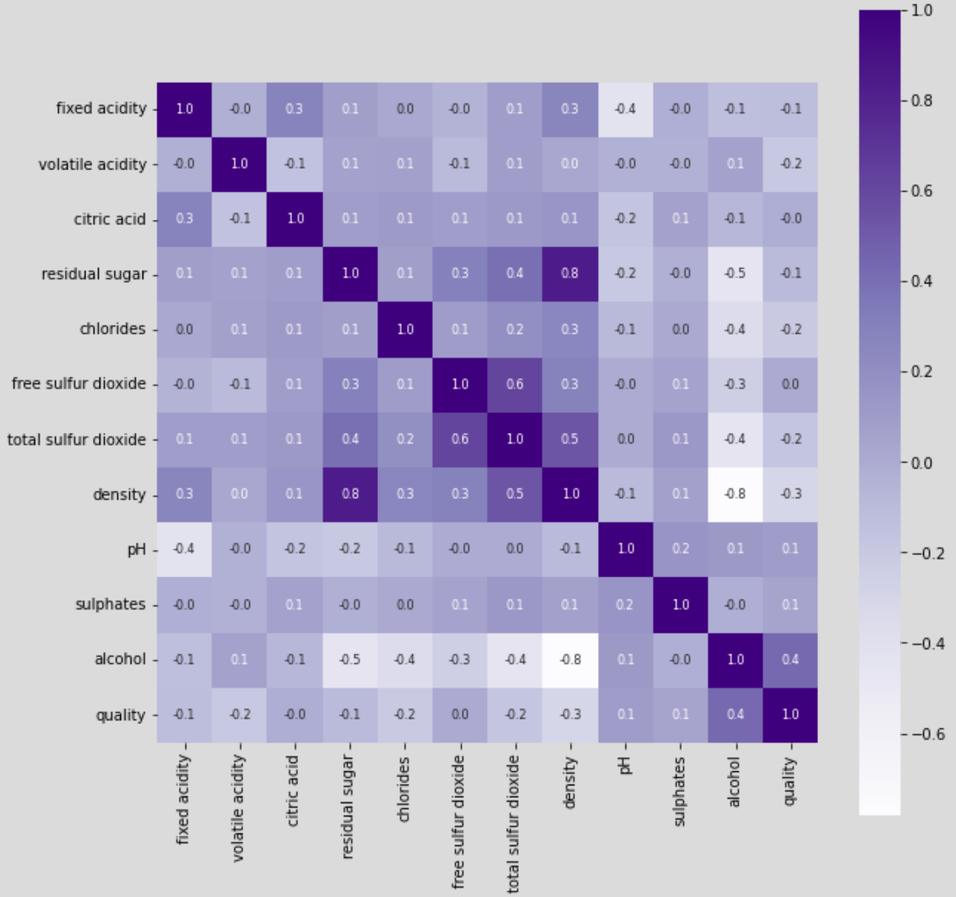
RESULTS

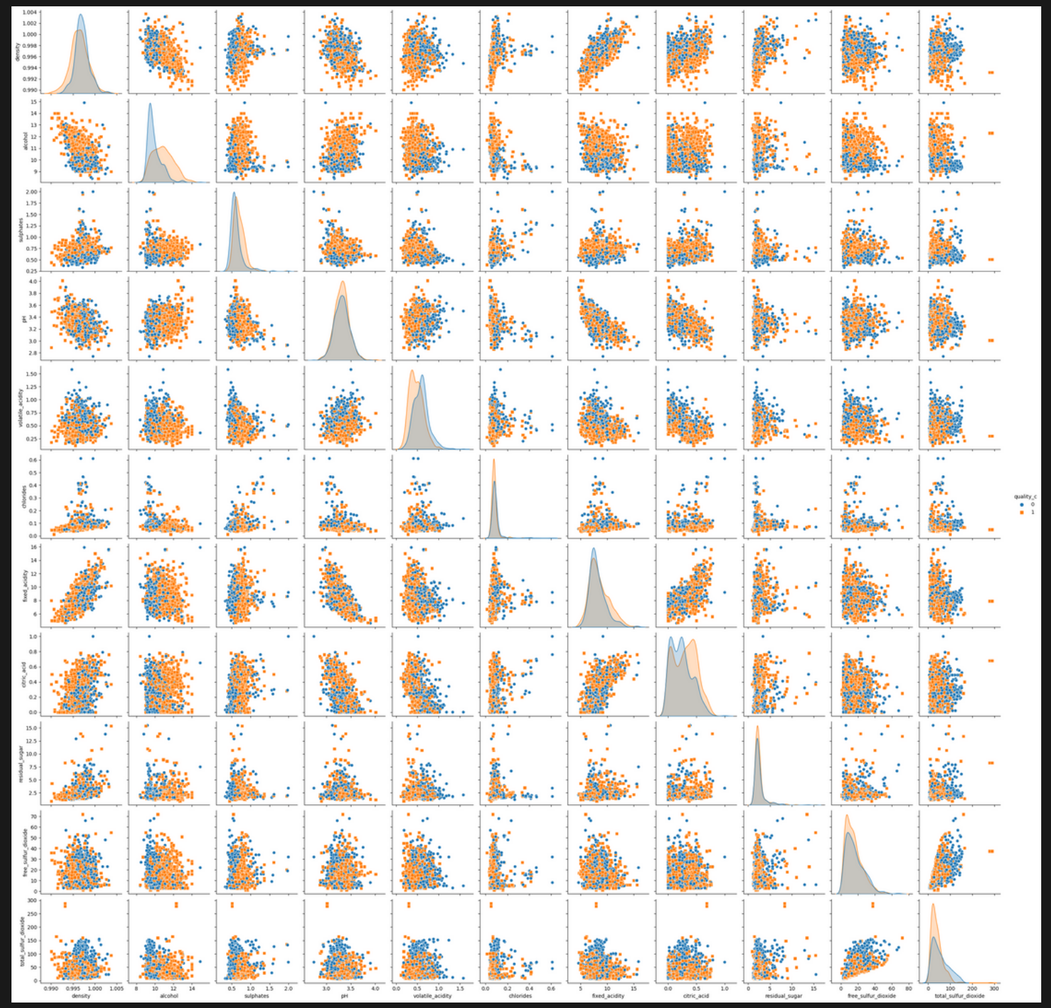
WINE QUALITY PREDICTION

COVARIANCE MATRIX





PAIR PLOT


density
alcohol
sulphates
pH
volatile_acidity
chlorides
fixed_acidity
citric_acid
residual_sugar
free_sulfur_dioxide
total_sulfur_dioxide
quality_c
0
1

LOGISTIC REGRESSION

```
Red Wine

Confusion Matrix:
 [[110  47]
 [ 49 114]]
Accuracy: 0.7
Score: 0.7
RMSE: 0.5477225575051661
```

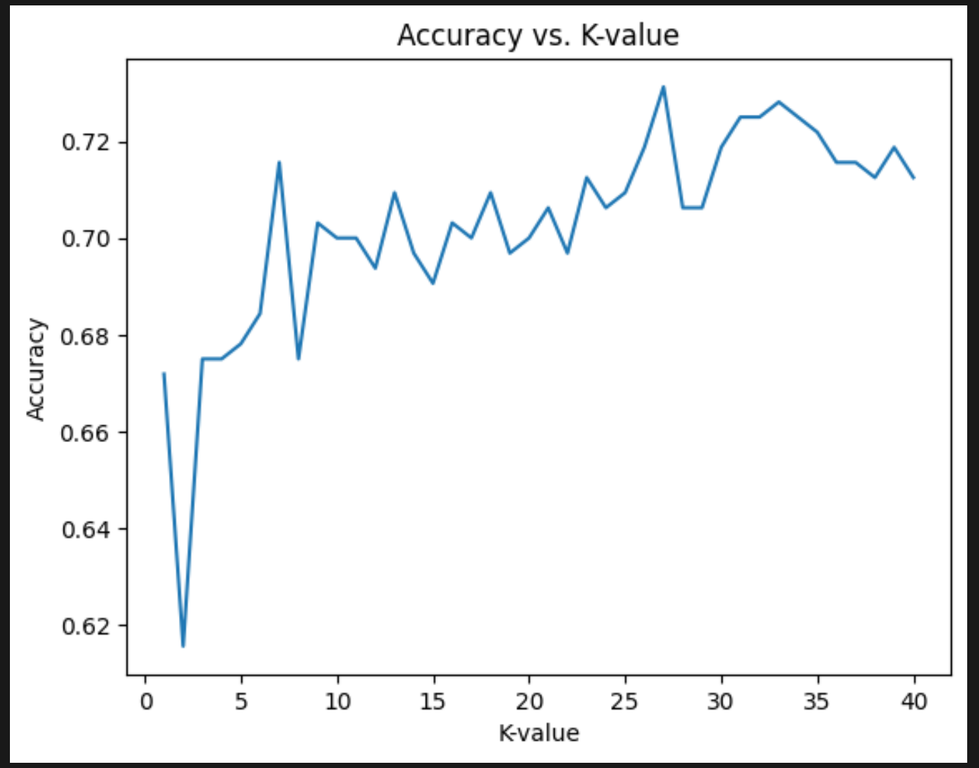
```
White Wine

Confusion Matrix:
 [[159 162]
 [103 556]]
Accuracy: 0.7295918367346939
Score: 0.7295918367346939
RMSE: 0.5200078492343227
```

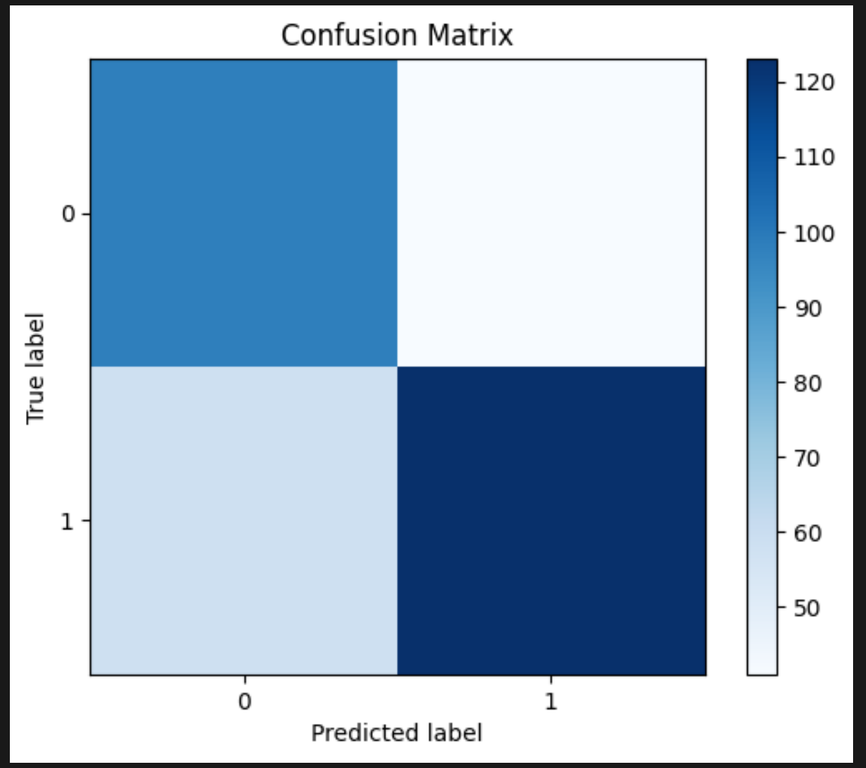
DECISION TREE

```
Red Wine

Confusion Matrix:
 [[106  38]
 [ 71 105]]
Accuracy: 0.659375
Score: 0.659375
RMSE: 0.5836308764964376
```

```
White Wine

Confusion Matrix:
 [[ 382  303]
 [ 258 1017]]
Accuracy: 0.7137755102040816
Score: 0.7137755102040816
RMSE: 0.5349995231735429
```

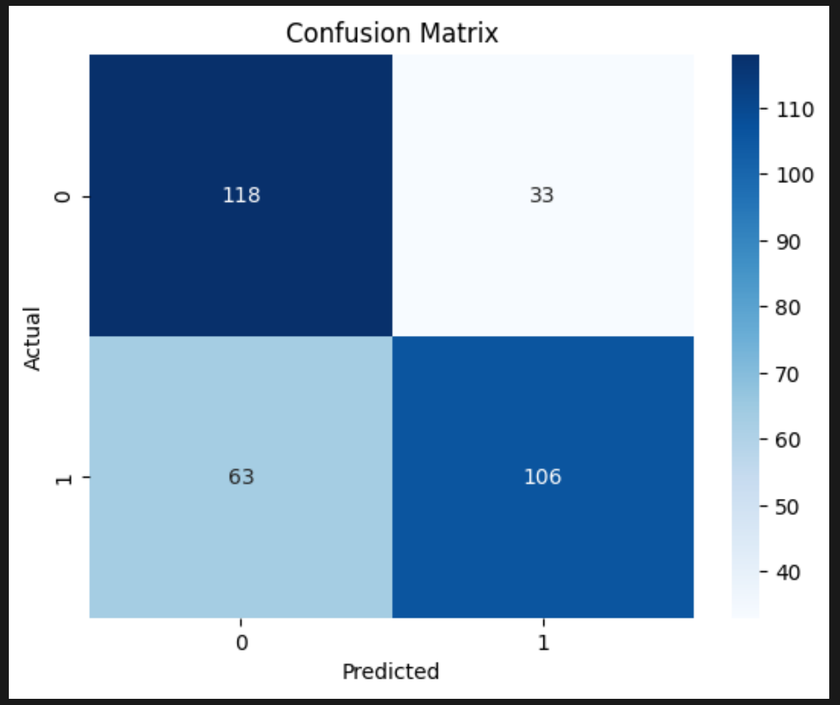
KNN

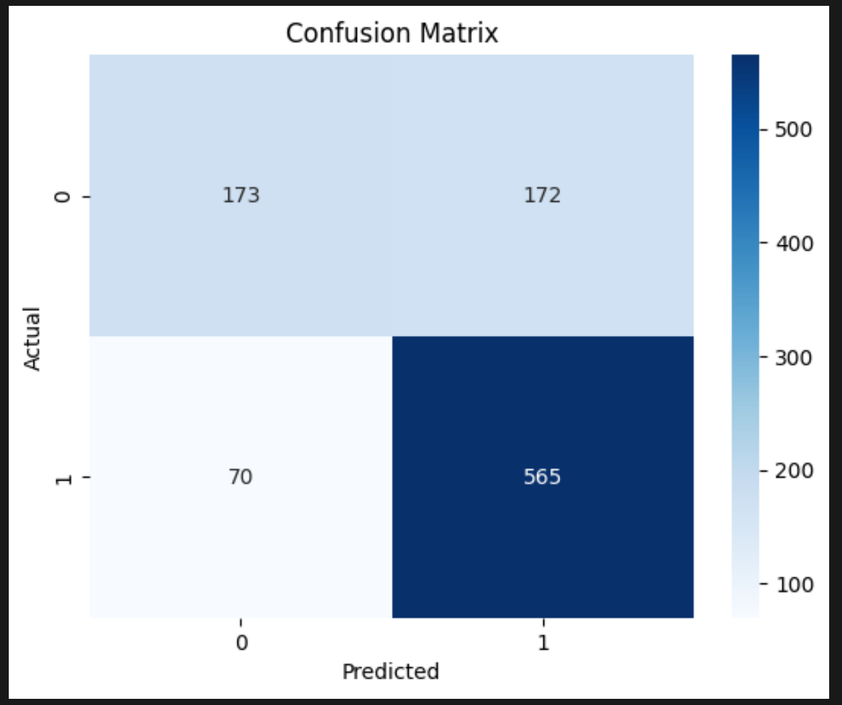




Accuracy: 70%

SVM





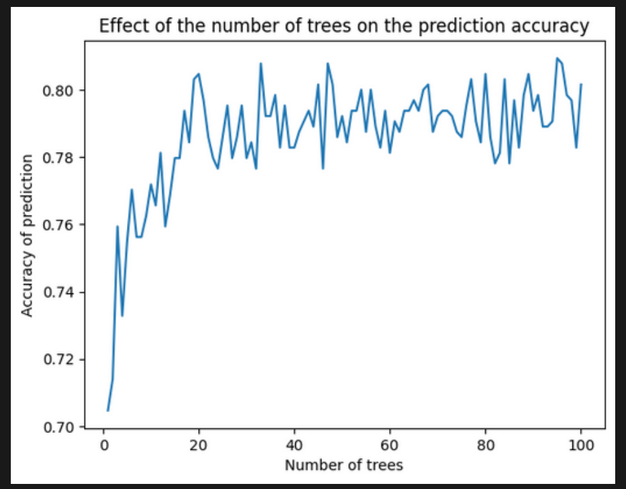
Red Wine

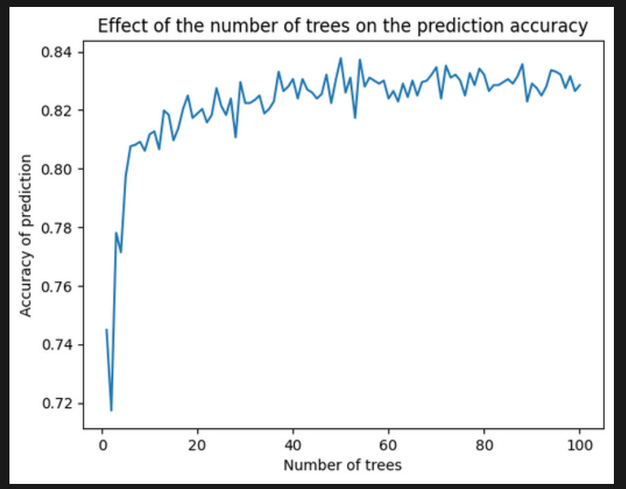
Accuracy : 71%

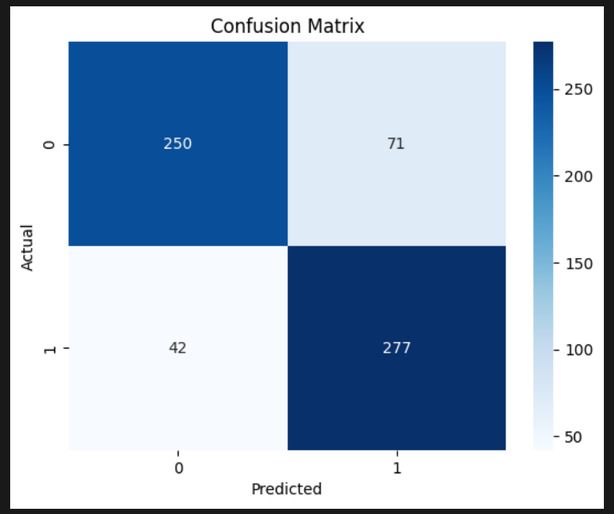
White Wine

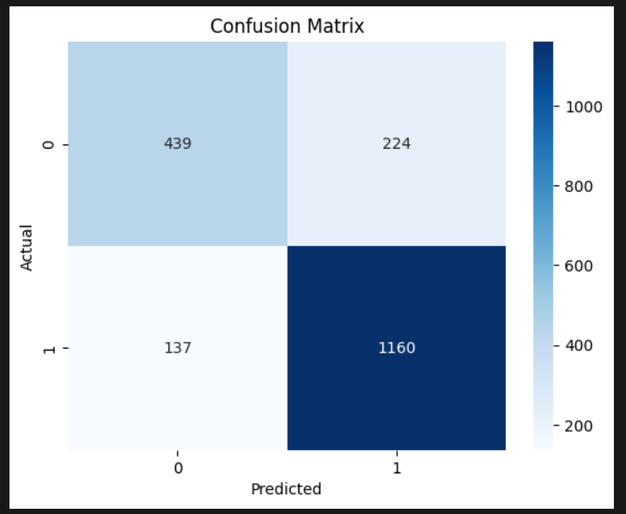
Accuracy : 73%

RANDOM FOREST





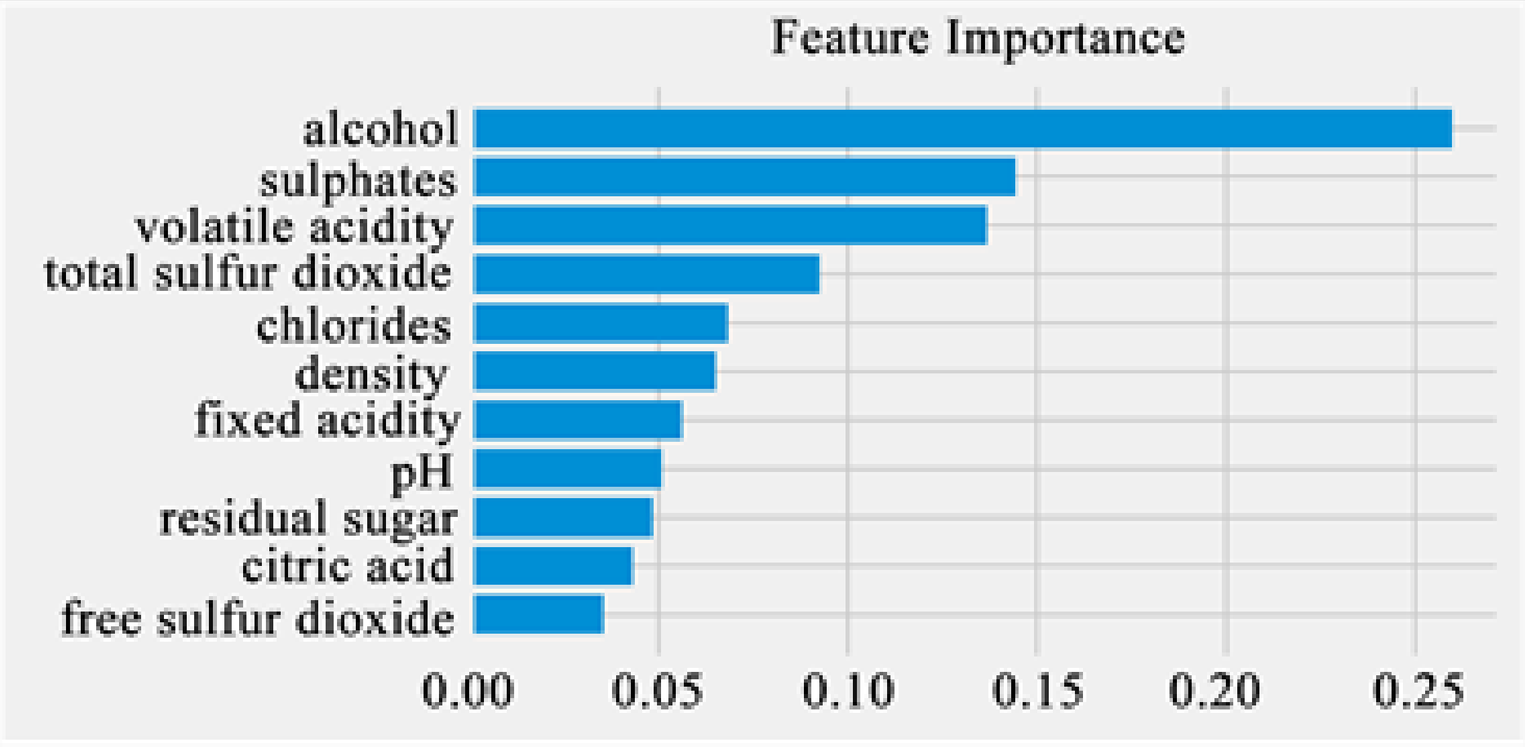




Red Wine
Accuracy : 80%

White Wine
Accuracy : 82%

FEATURE IMPORTANCE



THE END