

Step 8: Making Prediction

8.1) Making Prediction using Logistic Regression

```
print(f'Initial shape: {X_test.shape}')  
lr_pred = lr.predict(X_test)  
print(f'{lr_pred.shape}')
```

8.2) Making Prediction using KNN

```
knn_pred = knn.predict(X_test)  
knn_pred.shape
```

8.3) Making Prediction using Naive Bayes

```
nb_pred = nb.predict(X_test)  
nb_pred.shape
```

8.4) Making Prediction using SVM

```
sv_pred = sv.predict(X_test)  
sv_pred.shape
```

8.5) Making Prediction using Decision Tree

```
dt_pred = dt.predict(X_test)
```

8.6) Making Prediction using Random Forest

```
rf_pred = rf.predict(X_test)
```

Step 9: Model Evaluation

```
from sklearn.metrics import accuracy_score
```

```
# Train & Test Scores of Logistic Regression
```

```
print("Accuracy (Train) score of Logistic Regression  
",lr.score(X_train,Y_train)*100)  
print("Accuracy (Test) score of Logistic Regression ",  
lr.score(X_test,Y_test)*100)  
print("Accuracy score of Logistic Regression ",  
accuracy_score(Y_test,lr_pred)*100)
```

```
# Train & Test Scores of KNN
```

```
print("Accuracy (Train) score of KNN ",knn.score(X_train,Y_train)*100)  
print("Accuracy (Test) score of KNN ", knn.score(X_test,Y_test)*100)  
print("Accuracy score of KNN ", accuracy_score(Y_test,knn_pred)*100)
```

```
# Train & Test Scores of Naive-Bayes
```

```
print("Accuracy (Train) score of Naive Bayes ",nb.score(X_train,Y_train)*100)  
print("Accuracy (Test) score of Naive Bayes ", nb.score(X_test,Y_test)*100)  
print("Accuracy score of Naive Bayes ", accuracy_score(Y_test,nb_pred)*100)
```

```
# Train & Test Scores of SVM
```

```
print("Accuracy (Train) score of SVM ",sv.score(X_train,Y_train)*100)
```