Neural Networks & Deep Learning Assignment-5

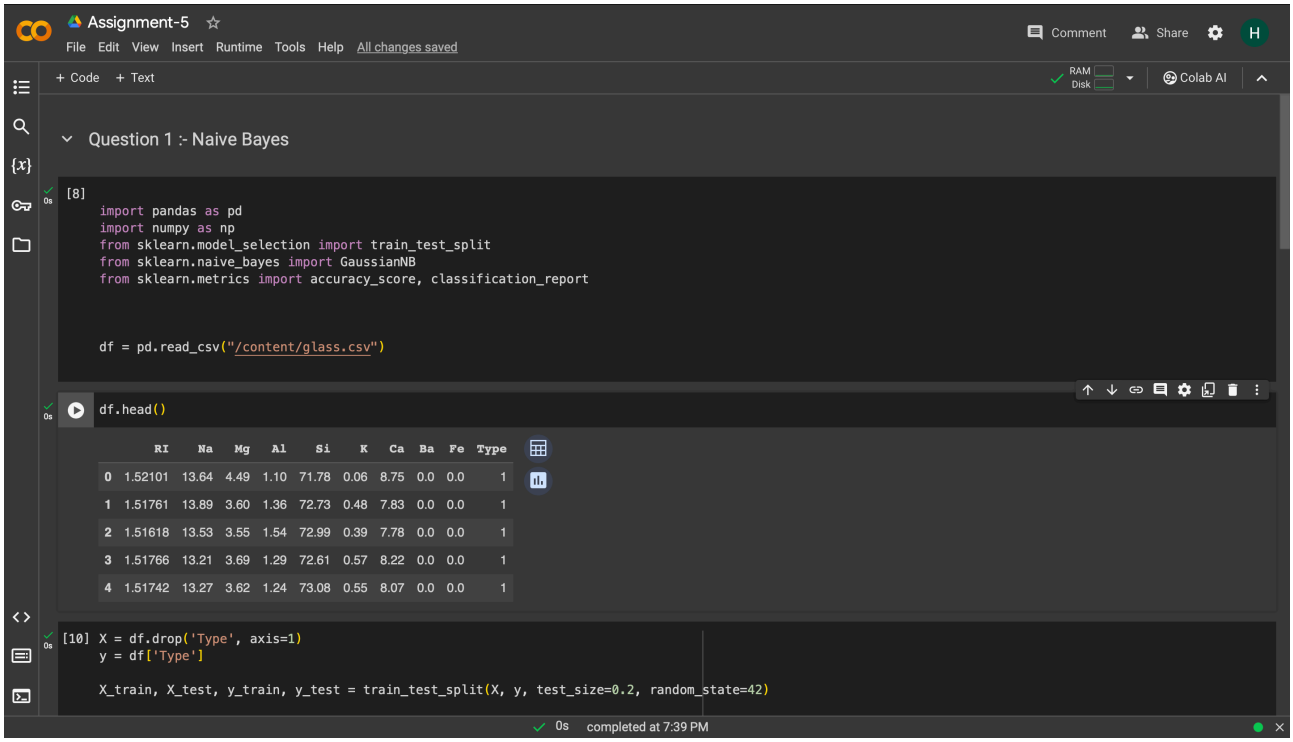
Harshavardhan Reddy Pattepur
700754833

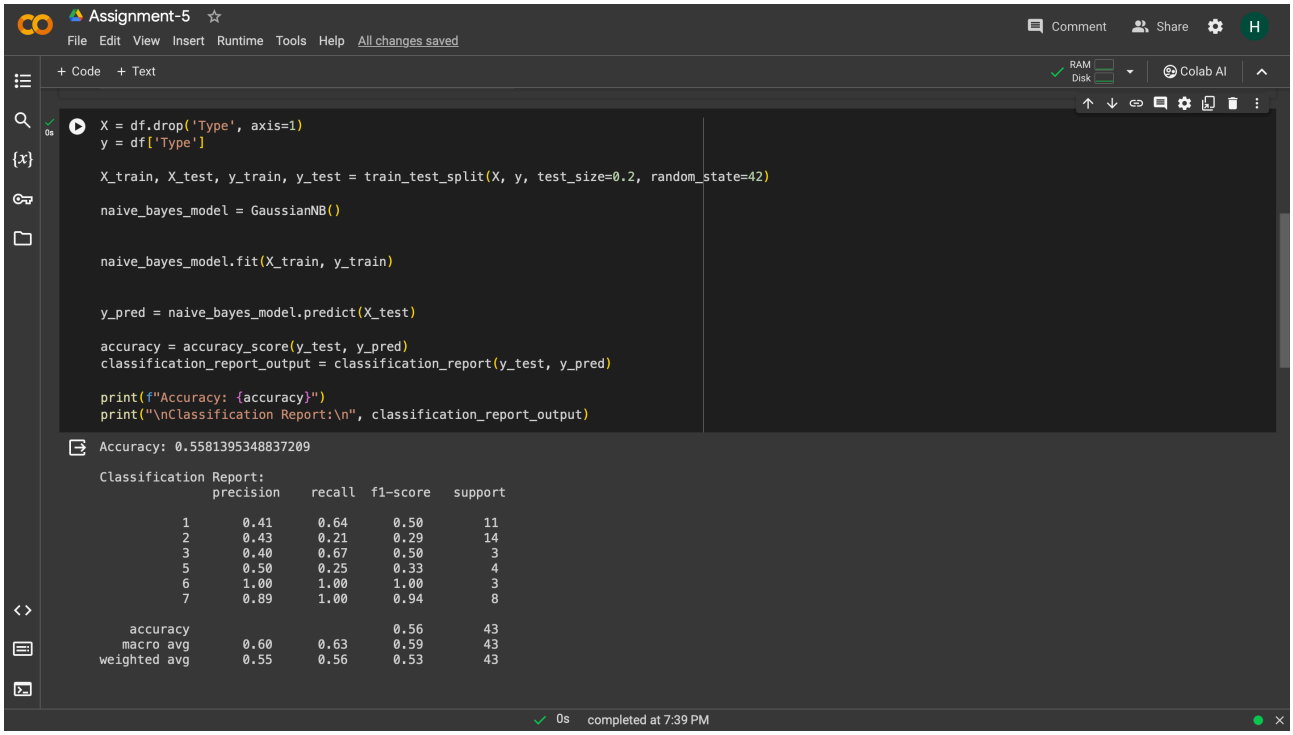
Repository Link :
https://github.com/harshavardhanreddy27/NNDL-Assignment-5

Video Link:
https://drive.google.com/file/d/13ez2F4la4H5lCKAlLrQr5Lq-UIAPNfHm/view?usp=share_link

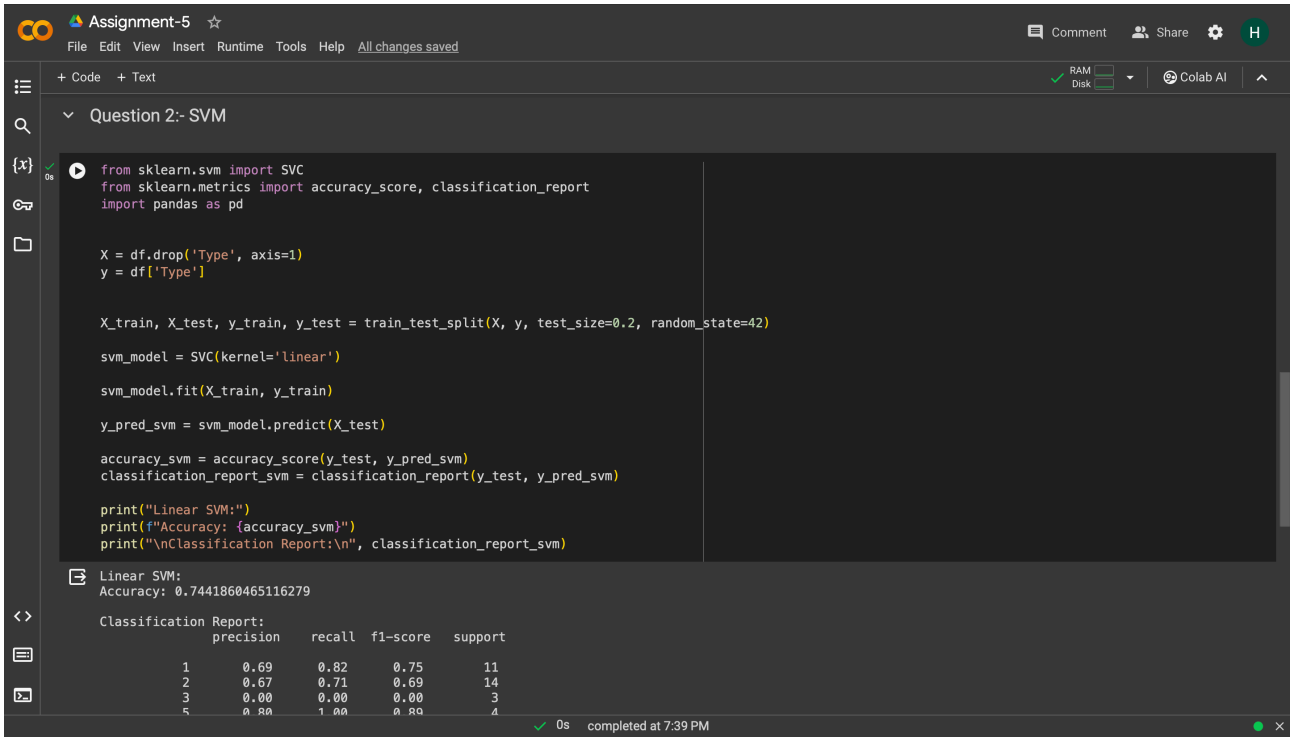
Code Screenshots:

Question:1




Assignment-5
File Edit View Insert Runtime Tools Help All changes saved
Comment
Share
H
+ Code
+ Text
RAM
Disk
Colab AI
X = df.drop('Type', axis=1)
y = df['Type']
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
naive_bayes_model = GaussianNB()
naive_bayes_model.fit(X_train, y_train)
y_pred = naive_bayes_model.predict(X_test)
accuracy = accuracy_score(y_test, y_pred)
classification_report_output = classification_report(y_test, y_pred)
print(f"Accuracy: {accuracy}")
print("\nClassification Report:\n", classification_report_output)
Accuracy: 0.5581395348837209
Classification Report:
precision recall f1-score support
1 0.41 0.64 0.50 11
2 0.43 0.21 0.29 14
3 0.40 0.67 0.50 3
5 0.50 0.25 0.33 4
6 1.00 1.00 1.00 3
7 0.89 1.00 0.94 8
accuracy 0.56 43
macro avg 0.60 0.63 0.59 43
weighted avg 0.55 0.56 0.53 43
0s completed at 7:39 PM

Question-2


Assignment-5
File Edit View Insert Runtime Tools Help All changes saved
Comment
Share
H
+ Code
+ Text
RAM
Disk
Colab AI
Question 2:- SVM
from sklearn.svm import SVC
from sklearn.metrics import accuracy_score, classification_report
import pandas as pd
X = df.drop('Type', axis=1)
y = df['Type']
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
svm_model = SVC(kernel='linear')
svm_model.fit(X_train, y_train)
y_pred_svm = svm_model.predict(X_test)
accuracy_svm = accuracy_score(y_test, y_pred_svm)
classification_report_svm = classification_report(y_test, y_pred_svm)
print("Linear SVM:")
print(f"Accuracy: {accuracy_svm}")
print("\nClassification Report:\n", classification_report_svm)
Linear SVM:
Accuracy: 0.7441860465116279
Classification Report:
precision recall f1-score support
1 0.69 0.82 0.75 11
2 0.67 0.71 0.69 14
3 0.00 0.00 0.00 3
0s completed at 7:39 PM

Result & Justification: