ICP5

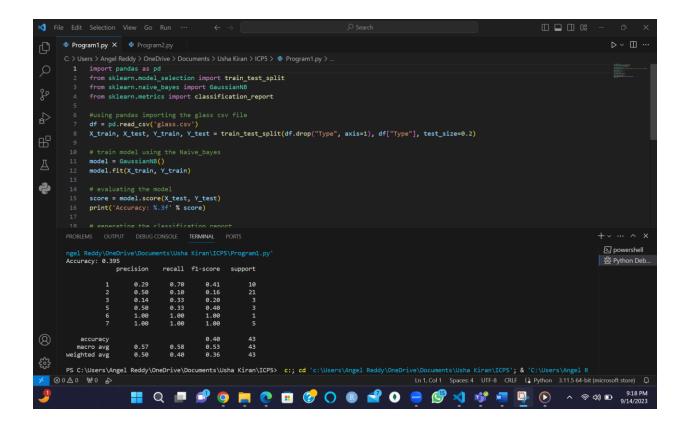
UshaKiran Yadav Avula

700746114

Program1:

```
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.naive bayes import GaussianNB
from sklearn.metrics import classification_report
#using pandas importing the glass csv file
df = pd.read csv('glass.csv')
X_train, X_test, Y_train, Y_test = train_test_split(df.drop("Type", axis=1),
df["Type"], test_size=0.2)
# train model using the Naive_bayes
model = GaussianNB()
model.fit(X_train, Y_train)
# evaluating the model
score = model.score(X_test, Y_test)
print('Accuracy: %.3f' % score)
# generating the classification report
y_pred = model.predict(X_test)
report = classification_report(y_true=Y_test, y_pred=y_pred)
print(report)
```

Output:



Program2:

```
import pandas as pd
from sklearn.model selection import train test split
from sklearn.svm import LinearSVC
from sklearn.metrics import classification report
# using pandas importing the dataset
df = pd.read csv('glass.csv')
X_train, X_test, Y_train, Y_test = train_test_split(df.drop("Type", axis=1),
df["Type"], test_size=0.2)
# train model using linear support vector machine
model = LinearSVC(dual=False)
model.fit(X_train, Y_train)
# evaluating the model
score = model.score(X_test, Y_test)
print('Accuracy: %.3f' % score)
# generating the classification report
y pred = model.predict(X test)
```

```
report = classification_report(y_true=Y_test, y_pred=y_pred)
print(report)
```

Output:

```
Program2.py X
                                 import pandas as pd
                                  from sklearn.model_selection import train_test_split
                                 from sklearn.svm import LinearSVC from sklearn.metrics import classification_report
                                 X_train, X_test, Y_train, Y_test = train_test_split(df.drop("Type", axis=1), df["Type"], test_size=0.2)
                Accuracy: 0.512
C:\Users\Angel Reddy\AppData\Local\Packages\PythonSoftwareFoundation.Python.3.11_qbz5n2kfra8p0\LocalCache\local-packages\Python311\site-packages\s klearn\metrics\_classification.py:1469: UndefinedMetrickNarning: Precision and F-score are ill-defined and being set to 0.0 in labels with no predicted samples. Use 'zero_division' parameter to control this behavior.

_warn_prf(average, modifier, msg_start, len(result))
C:\Users\Angel Reddy\AppData\LocalPackages\Python5oftwareFoundation.Python.3.11_qbz5n2kfra8p0\LocalCache\local-packages\Python311\site-packages\s klearn\metrics\_classification.py:1469: UndefinedMetrickNarning: Precision and F-score are ill-defined and being set to 0.0 in labels with no predicted samples. Use 'zero_division' parameter to control this behavior.

_warn_prf(average, modifier, msg_start, len(result))
C:\Users\Angel Reddy\AppData\Local\Packages\Python5oftwareFoundation.Python.3.11_qbz5n2kfra8p0\LocalCache\local-packages\Python311\site-packages\s klearn\metrics\_classification.py:1469: UndefinedMetrickNarning: Precision and F-score are ill-defined and being set to 0.0 in labels with no predicted samples. Use 'zero_division' parameter to control this behavior.

_warn_prf(average, modifier, msg_start, len(result))
    precision recall f1-score support
ê
                                                                                                                                                                                                                                                                                                                                                                                                           & Python Deb...
                                                                                         0.53
0.60
0.00
0.50
0.50
                                                                 0.53
0.50
0.00
0.33
1.00
0.50
                                                                                                                  0.53
0.55
0.00
0.40
0.67
0.67
                                                                                                                     0.51
0.47
  × ⊗0∆0 ₩0 &
                                                                                                                                                                                                                                                                     Ln 1, Col 1 Spaces: 4 UTF-8 CRLF {} Python 3.11.5 64-bit (microsoft store) Q
```

GitHub: