EX6 : Implement Machine learning Pipelines

Code :

import pandas as pd

from sklearn.model\_selection import train\_test\_split

from sklearn.ensemble import RandomForestClassifier

from sklearn.metrics import accuracy\_score, classification\_report

data = pd.read\_csv('customer\_data.csv')

X = data[['Age', 'Income']]

y = data['Purchased']

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.2, random\_state=42)

model = RandomForestClassifier(random\_state=42)

model.fit(X\_train, y\_train)

y\_pred = model.predict(X\_test)

accuracy = accuracy\_score(y\_test, y\_pred)

print(f'Accuracy: {accuracy:.2f}') report = classification\_report(y\_test, y\_pred)

print(report)

Output :

Accuracy: 0.00

precision recall f1-score support

0 0.00 0.00 0.00 2.0

1 0.00 0.00 0.00 0.0

accuracy 0.00 2.0

macro avg 0.00 0.00 0.00 2.0

weighted avg 0.00 0.00 0.00 2.0

/usr/local/lib/python3.10/dist-packages/sklearn/metrics/\_classification.py:1344: UndefinedMetricWarning: 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))

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