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In [17]: import numpy as np
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.neighbors import KNeighborsClassifier
from sklearn.metrics import accuracy_score, confusion_matrix, precision_sco
```

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In [18]: data = pd.read_csv('Social_Network_Ads.csv')
data.head()
```

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Out[18]:
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	User ID	Gender	Age	EstimatedSalary	Purchased
0	15624510	Male	19	19000	0
1	15810944	Male	35	20000	0
2	15668575	Female	26	43000	0
3	15603246	Female	27	57000	0
4	15804002	Male	19	76000	0

```
In [19]: X = data.iloc[:,2:4]
y = data['Purchased']
X_train, X_test, y_train, y_test = train_test_split(X,y,test_size=0.2,randome
```

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In [20]: sc = StandardScaler()
X_train_scaled = sc.fit_transform(X_train)
X_test_scaled = sc.transform(X_test)
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In [23]: k = 5
knn_classifier = KNeighborsClassifier(n_neighbors=k)
knn_classifier.fit(X_train_scaled, y_train)
y_pred = knn_classifier.predict(X_test_scaled)
```

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In [27]: conf_matrix = confusion_matrix(y_test,y_pred)
acc = accuracy_score(y_test,y_pred)
error = 1 - acc
precision = precision_score(y_test,y_pred)
recall = recall_score(y_test,y_pred)

print('Confusion Matrix:\n', conf_matrix)
print('Accuracy:',acc*100,'%')
print('Error:',error)
print('Precision:',precision)
print('Recall:',recall)
```

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Confusion Matrix:
[[48  4]
 [ 3 25]]
Accuracy: 91.25 %
Error: 0.08750000000000002
Precision: 0.8620689655172413
Recall: 0.8928571428571429
```

In []: