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DATE:11/02/2026

Experiment:26

EXP:27

EXP:28

EXP:29

EXP 29 – Evaluation Metric

```
[6]
✓ 0s
        from sklearn.datasets import load_iris
        from sklearn.model_selection import train_test_split
        from sklearn.tree import DecisionTreeClassifier
        from sklearn.metrics import *

        X,y = load_iris(return_X_y=True)
        X1,X2,y1,y2 = train_test_split(X,y,test_size=0.3)

        m = DecisionTreeClassifier().fit(X1,y1)
        p = m.predict(X2)

        print("Acc:",accuracy_score(y2,p))
        print("Prec:",precision_score(y2,p,average='macro'))
        print("Rec:",recall_score(y2,p,average='macro'))
        print("F1:",f1_score(y2,p,average='macro'))
```

```
Acc: 0.9555555555555556
Prec: 0.9555555555555556
Rec: 0.9583333333333334
F1: 0.953968253968254
```

EXP:30

EXP 30 – CART (Decision Tree Regression)

```
[8]
✓ 41s
        import pandas as pd
        from sklearn.tree import DecisionTreeRegressor

        df = pd.read_csv("car_data.csv")
        X,y = df[["Mileage","Age"]], df["Price"]
        m = DecisionTreeRegressor().fit(X,y)

        mi = float(input("Mileage: "))
        ag = int(input("Age: "))
        print("Price:", m.predict([[mi,ag]])[0])
```
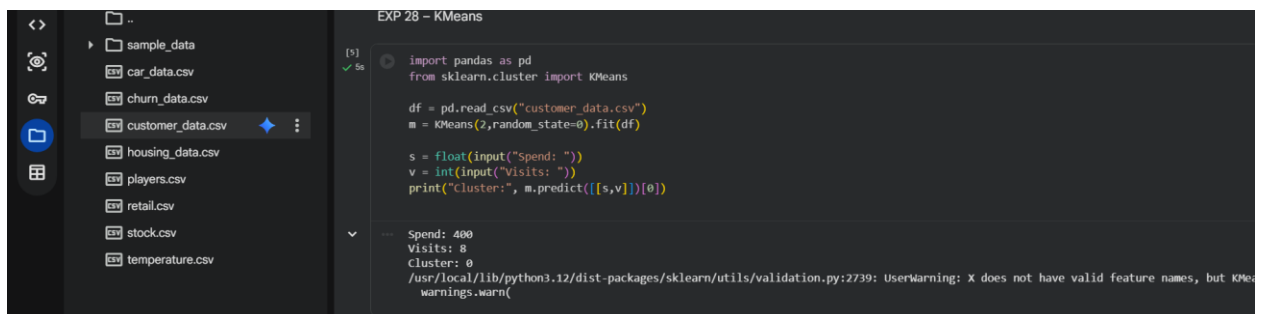
```
Mileage: 25000
Age: 2
Price: 750000.0
/usr/local/lib/python3.12/dist-packages/sklearn/utils/validation.py:2739: UserWarning: X does not have valid feature names, but Deci
  warnings.warn(
```