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from sklearn.datasets import load_iris
from sklearn.tree import DecisionTreeClassifier
from sklearn.model_selection import train_test_split
from sklearn import metrics

iris = load_iris()
X = iris.data
y = iris.target

X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=42)
clf = DecisionTreeClassifier(random_state=42)

clf.fit(X_train, y_train)

y_pred = clf.predict(X_test)
print(f"Model Accuracy: {metrics.accuracy_score(y_test, y_pred) * 100:.2f}%")

print("\nEnter the features for the new flower:")
sepal_length = float(input("Sepal length (cm): "))
sepal_width = float(input("Sepal width (cm): "))
petal_length = float(input("Petal length (cm): "))
petal_width = float(input("Petal width (cm): "))

new_flower = [[sepal_length, sepal_width, petal_length, petal_width]]

species_pred = clf.predict(new_flower)

species_names = iris.target_names
predicted_species = species_names[species_pred][0]

print(f"\nThe predicted species of the new flower is: {predicted_species}")

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OUTPUT

Model Accuracy: 100.00%

Enter the features for the new flower:

Sepal length (cm): 24

Sepal width (cm): 32

Petal length (cm): 26

Petal width (cm): 28

The predicted species of the new flower is: virginica