import numpy as np

import pandas as pd

dataset = pd.read\_csv("iris.csv")

X = dataset.iloc[:, :-1].values

y = dataset.iloc[:, 4].values

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

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.20)

from sklearn.neighbors import KNeighborsClassifier

classifier = KNeighborsClassifier(n\_neighbors=5)

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

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

from sklearn.metrics import classification\_report

print(classification\_report(y\_test, y\_pred))

from sklearn.metrics import accuracy\_score

print ("Accuracy : ", accuracy\_score(y\_test, y\_pred))

df = pd.DataFrame({'Real Values':y\_test, 'Predicted Values':y\_pred})w

print(df)

new\_test\_point = np.array([[5.1, 3.5, 1.4, 0.2]])

prediction = classifier.predict(new\_test\_point)

print(f"\n Predicted class: {prediction[0]}")

**output**

Setosa 0.91 1.00 0.95 10

Versicolor 1.00 0.89 0.94 9

Virginica 1.00 1.00 1.00 11

accuracy 0.97 30

macro avg 0.97 0.96 0.96 30

weighted avg 0.97 0.97 0.97 30

Accuracy : 0.9666666666666667

Real Values Predicted Values

0 Virginica Virginica

1 Versicolor Versicolor

2 Setosa Setosa

3 Virginica Virginica

4 Virginica Virginica

5 Setosa Setosa

6 Virginica Virginica

7 Setosa Setosa

8 Setosa Setosa

9 Virginica Virginica

10 Versicolor Versicolor

11 Setosa Setosa

12 Versicolor Versicolor

13 Virginica Virginica

14 Setosa Setosa

15 Versicolor Versicolor

16 Versicolor Setosa

17 Setosa Setosa

18 Virginica Virginica

19 Virginica Virginica

20 Setosa Setosa

21 Versicolor Versicolor

22 Virginica Virginica

23 Versicolor Versicolor

24 Setosa Setosa

25 Virginica Virginica

26 Setosa Setosa

27 Versicolor Versicolor

28 Versicolor Versicolor

29 Virginica Virginica

Predicted class: Setosa

Process finished with exit code 0