ITA0612 – MACHINE LEARNING FOR DECISION MAKING

LAB EXPERIMENT 5 – K-NEAREST NEIGHBOURS (K-NN)

AIM:

To implement the K-Nearest Neighbours Algorithm in Python.

ALGORITHM:

1. Load the dataset.
2. Choose the value of K.
3. Calculate the distance between test and training points.
4. Select the K nearest neighbors.
5. Assign the most common class label.

PYTHON CODE:

```
from sklearn.datasets import load_iris

from sklearn.neighbors import KNeighborsClassifier

iris = load_iris()

X, y = iris.data, iris.target

knn = KNeighborsClassifier(n_neighbors=3)

knn.fit(X, y)

sample = [[5.1, 3.5, 1.4, 0.2]]

print("Predicted Class:", knn.predict(sample))
```

SAMPLE OUTPUT:

```
Predicted Class: [0]
```

RESULT:

Thus, the K-Nearest Neighbours Algorithm was successfully implemented and used and used for classification.