

# Classifying a Query Point

# Classifying a Query Point with KNN

## Function Signature

```
def classify(self, query_point):
```

## Parameters

- **query\_point**: The point for which classification is to be determined.

## Return Value

Returns the classification result for the `query_point` based on the stored values in the KNN instance.

## Description

The `classify` function classifies a given `query_point` based on the stored values in the KNN instance. The distance between the points is calculated using the Minkowski distance metric with the stored power parameter. The labels of the stored data points are then used to determine the classification of the `query_point`.

It's important to note that the `store_vals` function must be called prior to using the `classify` function to ensure that the necessary values are stored in the KNN instance.

# Examples

```
from deeprai.models import KNN

# Sample data
x_vals = [[1, 2], [2, 3], [3, 4]]
y_vals = [0, 1, 0]
query_point = [2, 2]

# Create an instance of the classifier
classifier = KNN()

# Store the values in the classifier
classifier.store_vals(x_vals, y_vals, p=3, k=2)

# Classify the query_point
result = classifier.classify(query_point)
print(result) # This will print the classification result for the query_point
```

---

Revision #1

Created 12 October 2023 04:56:21 by Kieran Carter

Updated 12 October 2023 04:59:46 by Kieran Carter