## **Project 04**

## I. Classifier Design

- 1. Split the N data points into the training set and testing set.
- 2. Use the KNN classifier provide in sklearn and fit it and the training set.

## II. Choose K

- 1. Use the fitted KNN classifier on the testing set and calculate the mean accuracy on the given test data and labels.
- 2. According to our experiences, we choose K in the range of 1 to  $2\sqrt{N}$ .
- 3. Choose K with the best score on the testing set.

## III. Table



