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In [16]: #import libraries
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
from sklearn.model_selection import train_test_split
from scipy.spatial import distance
from sklearn.metrics import accuracy_score
from sklearn.neighbors import KNeighborsClassifier

#read data file as dataframe
data = pd.read_csv('iris.csv')

#take four numeric features as X input dataframe to array convert
X = data.values[:, :4]

#create an array of length 150 named y 150 values are zeros
y = np.zeros(150)

#encoding classes to numbers number mapping with respect to string values
for i in range(len(y)):
    if data.values[i, 4]=='setosa':
        y[i] = 0
    elif data.values[i, 4]=='versicolor':
        y[i] = 1
    elif data.values[i, 4]=='virginica':
        y[i] = 2

#randomly shuffle the whole dataset and create train-test partition
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.33, random_

dis = distance.cdist(X_test, X_train, 'euclidean')

for i in range (50):
    y2 = np.argsort(dis, axis = 1)

j = 0
k = 5
pre = []
for j in range(0, 50):
    y3 = np.zeros(13)
    for i in range (0, k):
        no = y2[j][i]
        value = int(y_train[no])
        y3[value] += 1
    pre.append(np.argmax(y3, axis = 0))

accuracy_score(y_test, pre)

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Out[16]: 0.97999999999999998

In []:

