

BLG457E-Learning From Data HW1-Question 4

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Given data set has 2 classes and 2 features. Code written by us, selects approximately 300 elements from class 1 and another approximately 300 elements from class 2 randomly. Then using leftover data as training, it tries to estimate chosen data's classes by KNN classifier. Homework code (code.m) only requires d matrix from hw1.mat, then produces output with success rates of KNN2 and KNN5. After that it plots example data and KNN2, KNN5 data. Class 1 is red and class 2 is blue in plot. Example data has '+' shape, KNN2 data has 'o' shape and KNN5 data has '◇' shape.

Produced output:

KNN2 Success Rate: 0.870242214532872

KNN 5 Success Rate: 0.885813148788927

KNN5 has a little bit higher success rate than KNN2 in most of the cases.

Plotted data:

