1. Plug-in Rule – write the code to perform the simple Plug-in Rule classifier. Use the same training and test files provided for the k-NN homework.

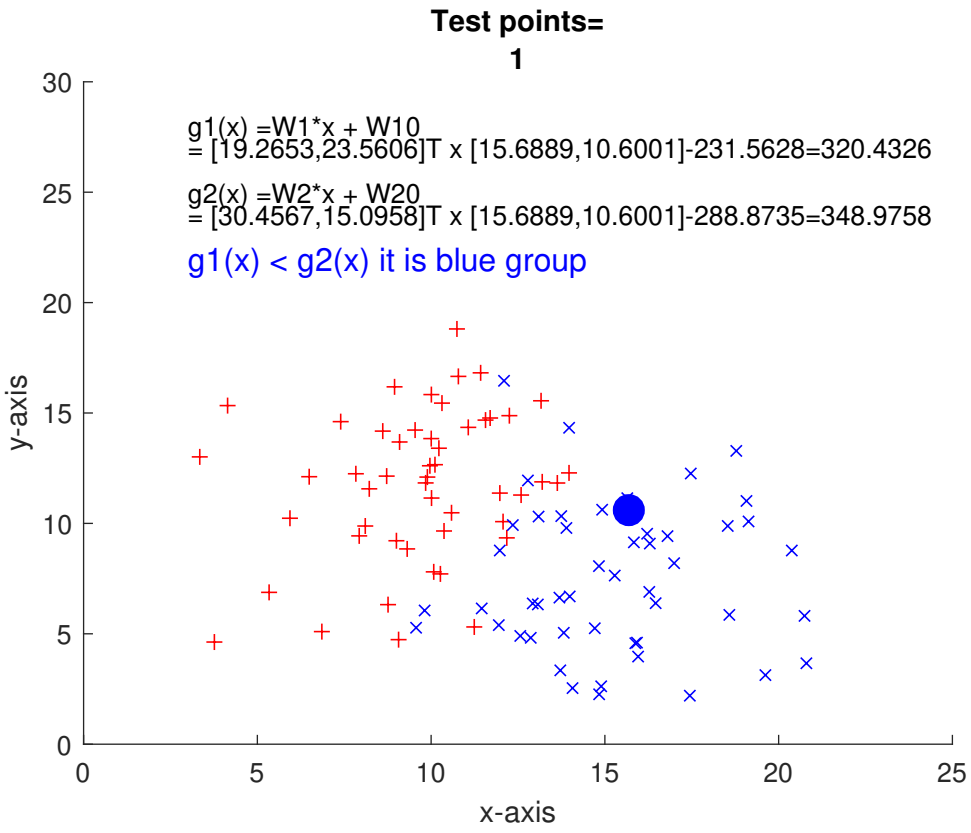
Files and outputs: (see following pages for output results)

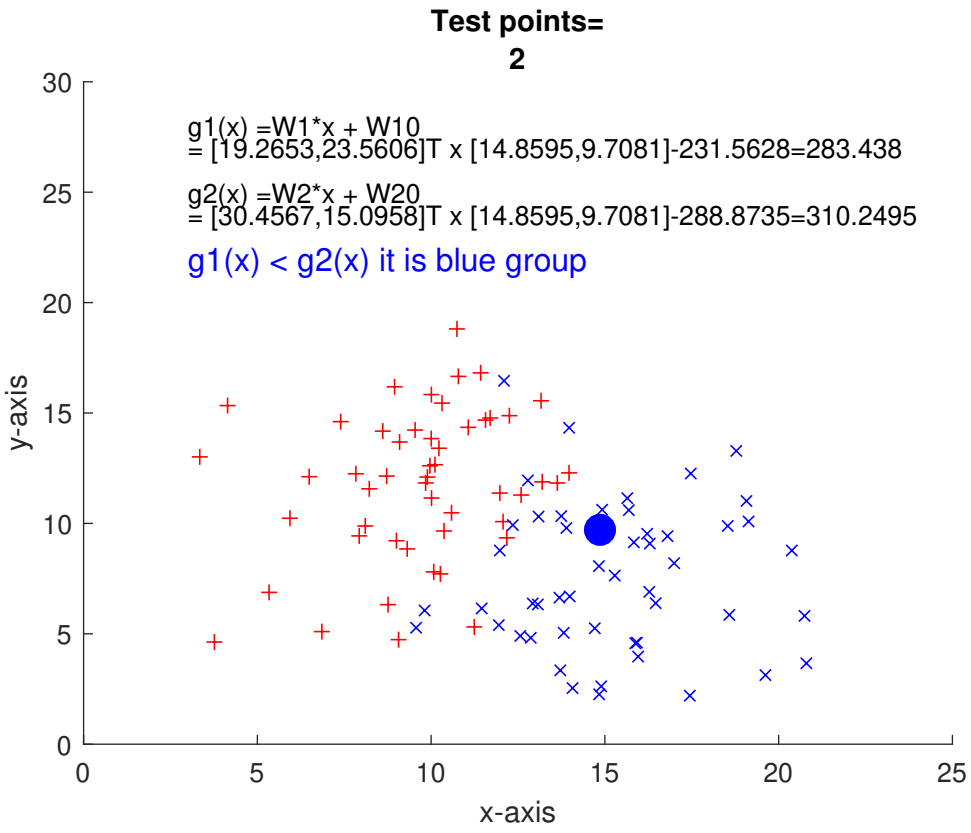
1. Code will generate the 2D.ps in the working directory.

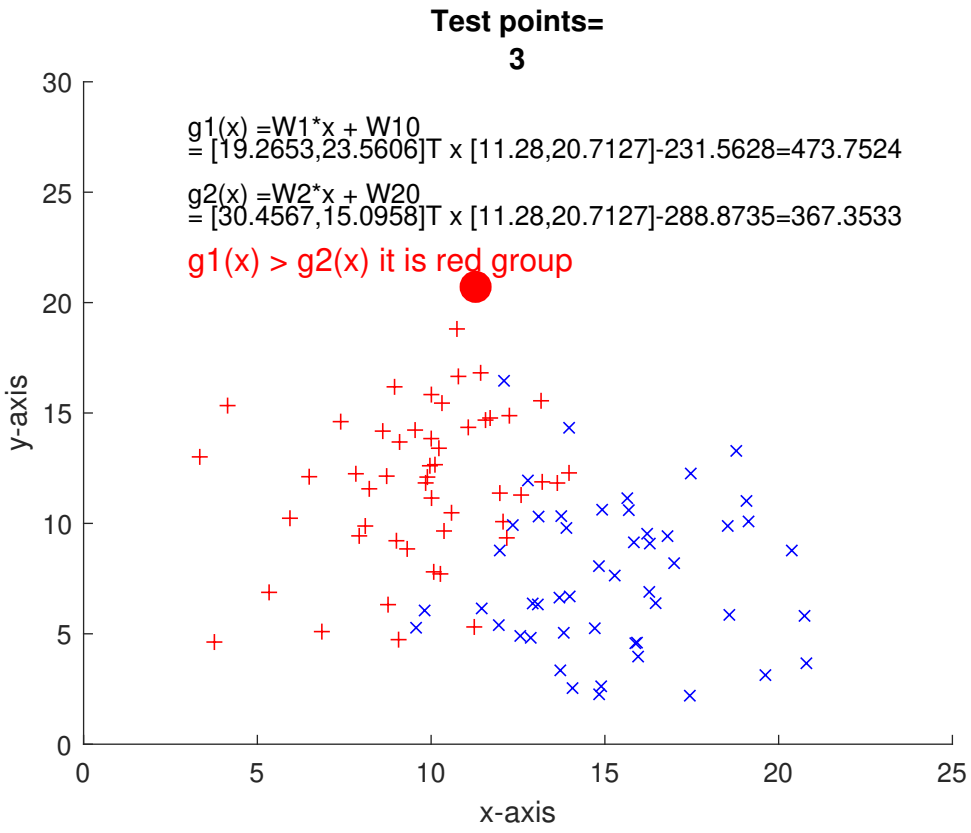
   Those files can be converted to pdf with online resources.

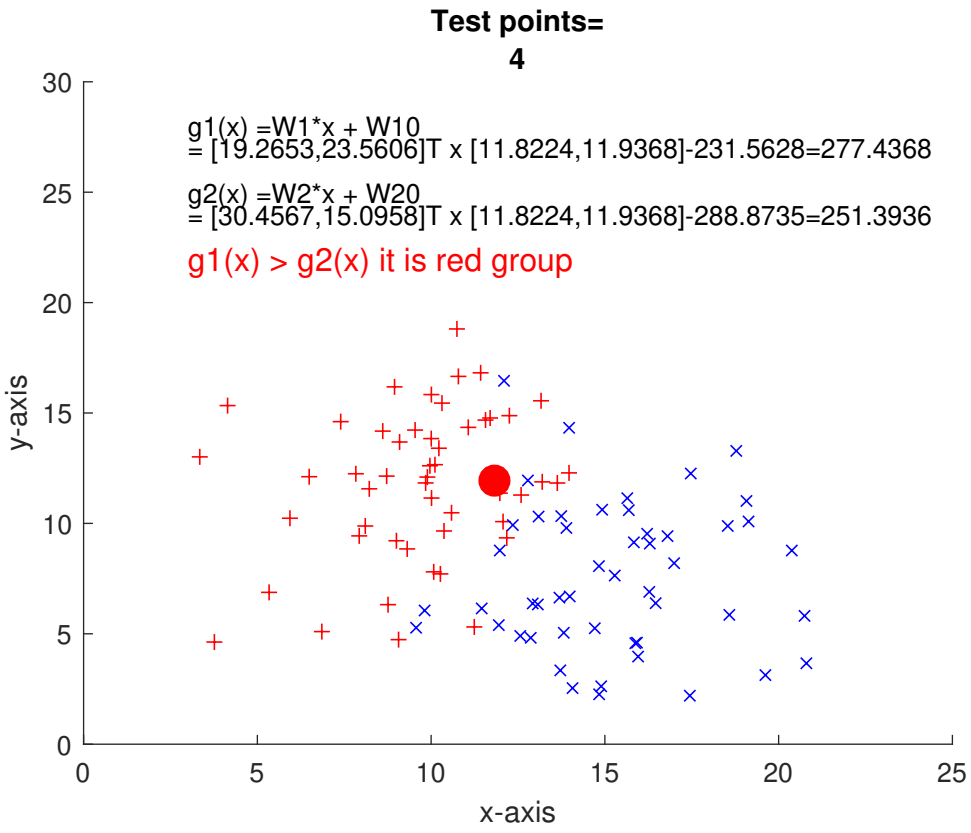
Files submitted:

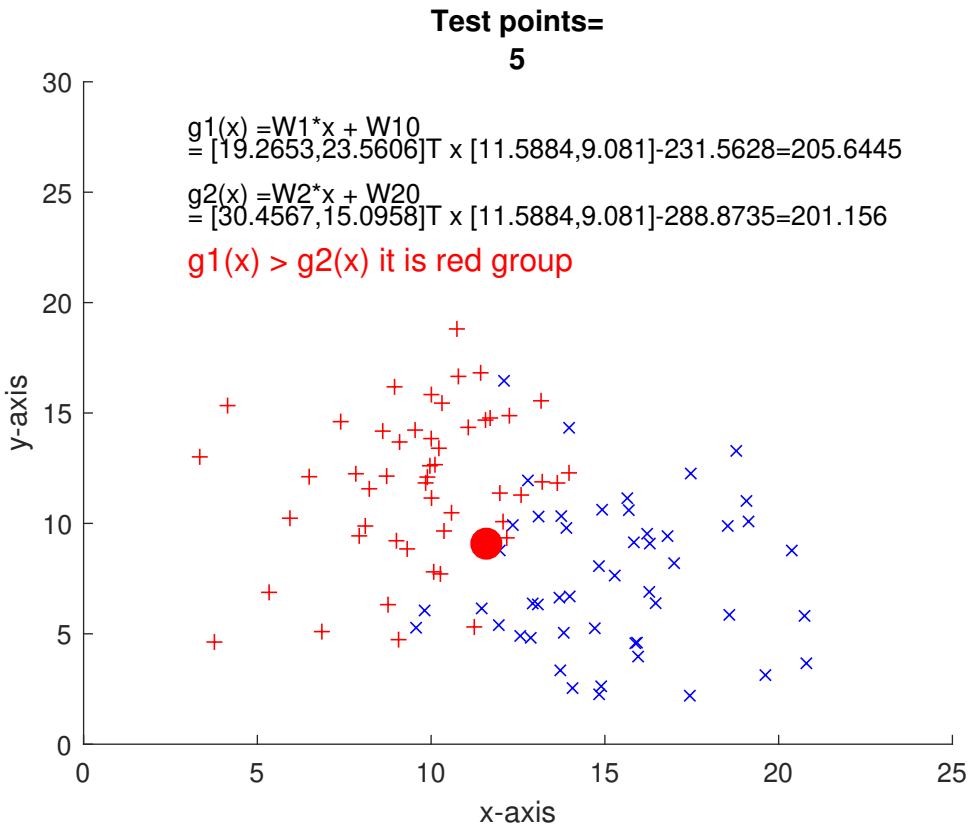
1. hw8CSC546_2D_P.m code
2. homework_classify_test_2D.dat test data
3. homework_classify_train_2D.dat training data


Test points=
1
g1(x) =W1*x + W10
= [19.2653,23.5606]T x [15.6889,10.6001]-231.5628=320.4326
g2(x) =W2*x + W20
= [30.4567,15.0958]T x [15.6889,10.6001]-288.8735=348.9758
g1(x) < g2(x) it is blue group
y-axis
x-axis
0
5
10
15
20
25
30


Test points=
2
g1(x) =W1*x + W10
= [19.2653,23.5606]T x [14.8595,9.7081]-231.5628=283.438
g2(x) =W2*x + W20
= [30.4567,15.0958]T x [14.8595,9.7081]-288.8735=310.2495
g1(x) < g2(x) it is blue group
y-axis
x-axis
0
5
10
15
20
25
30


Test points=
3
g1(x) =W1*x + W10
= [19.2653,23.5606]T x [11.28,20.7127]-231.5628=473.7524
g2(x) =W2*x + W20
= [30.4567,15.0958]T x [11.28,20.7127]-288.8735=367.3533
g1(x) > g2(x) it is red group
y-axis
x-axis
0
5
10
15
20
25
30


Test points=
4
g1(x) =W1*x + W10
= [19.2653,23.5606]T x [11.8224,11.9368]-231.5628=277.4368
g2(x) =W2*x + W20
= [30.4567,15.0958]T x [11.8224,11.9368]-288.8735=251.3936
g1(x) > g2(x) it is red group
y-axis
x-axis
0
5
10
15
20
25
30


Test points=
5
g1(x) =W1*x + W10
= [19.2653,23.5606]T x [11.5884,9.081]-231.5628=205.6445
g2(x) =W2*x + W20
= [30.4567,15.0958]T x [11.5884,9.081]-288.8735=201.156
g1(x) > g2(x) it is red group
y-axis
x-axis
0
5
10
15
20
25
30