

Assignment 10

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Editor - C:\Users\ivani\OneDrive\Desktop\CPT_S 534\ass10.m
quiz2.m  x  quiz2_1.m  x  quiz2_2.m  x  ass10.m  x  quiz2_3.m  x  +

1  p1=[-1,1,-1]';
2  t1=1;
3  p2=[1,1,-1]';
4  t2=0;
5  wold=[0.5,-1,-0.5]';
6  bold=0.5;
7  [wnew1,bnew1,e1] = update_PLA(wold,bold,p1,t1);
8  disp(["Error:", e1,bnew1])
9  disp(wnew1)
10 [wnew2,bnew2, e2] = update_PLA(wnew1,bnew1,p2,t2);
11 disp(["Error:", e2,bnew2])
12 disp(wnew2)
13
14 [wnew3,bnew3,e3] = update_PLA(wnew2,bnew2,p1,t1);
15 disp(["Error:", e3,bnew3])
16 disp(wnew3)
17 [wnew4,bnew4, e4] = update_PLA(wnew3,bnew3,p2,t2);
18 disp(["Error:", e4,bnew4])
19 disp(wnew4)
20
21 % Calculate the margin for point 1
22 margin_p1 = abs(dot(wnew3, p1) + bnew3) / norm(wnew3);
23 disp(["Margin for Point 1:", margin_p1])
24
25 % Calculate the margin for point 2
26 margin_p2 = abs(dot(wnew4, p2) + bnew4) / norm(wnew4);
27 disp(["Margin for Point 2:", margin_p2])
28
```

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Command Window
New to MATLAB? See resources for Getting Started.

>> ass10
    "Error:"      "1"      "1.5"

-0.5000
         0
-1.5000

    "Error:"      "-1"      "0.5"

-1.5000
-1.0000
-0.5000

    "Error:"      "0"      "0.5"

-1.5000
-1.0000
-0.5000

    "Error:"      "0"      "0.5"

-1.5000
-1.0000
-0.5000

    "Margin for Point 1:"      "0.80178"

    "Margin for Point 2:"      "0.80178"
```