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Editor - C:\Users\ivani\OneDrive\Desktop\CPT_S 534\HW6_classify_by_mlr.m
ass1.m x ass2.m x ass3.m x ass4.m x ass5.m x quiz1.m x
1  Z = csvread('glass_data_HW6.csv');
2  [rows,cols] = size(Z);
3  disp([rows,cols])
4  V=ones(rows,10);
5  for k=1:9
6      V(:,k+1)=Z(:,k);
7  end
8  y=Z(:,10);
9  A=V'*V;
10 b=V'*y;
11 w=A\b;
12 fit=V*w;
13 r=fit-y;
14 sse=r'*r;
15 ybar=sum(y)/rows;
16 var=y-ybar;
17 sst=var'*var;
18 rsq=(sst-sse)/sst;
19 disp(rsq)
20
21 cmat=zeros(3,3);
22 for i=1:rows
23     class=y(i);
24     bin=2;
25     if(fit(i)<1.5)bin=1;end;
26     if(fit(i)>4)bin=6;end;
27     if(bin==1&&class==1)
28         cmat(1,1)=cmat(1,1)+1;end;
29     if(bin==2&&class==1)
30         cmat(2,1)=cmat(2,1)+1;end;
31     if(bin==6&&class==1)
32         cmat(3,1)=cmat(3,1)+1;end;
33
34     if(bin==1&&class==2)
35         cmat(1,2)=cmat(1,2)+1;end;
36     if(bin==2&&class==2)
37         cmat(2,2)=cmat(2,2)+1;end;
38     if(bin==6&&class==2)
39         cmat(3,2)=cmat(3,2)+1;end;
40     if(bin==1&&class==6)
41         cmat(1,3)=cmat(1,3)+1;end;
42     if(bin==2&&class==6)
43         cmat(2,3)=cmat(2,3)+1;end;
44     if(bin==6&&class==6)
45         cmat(3,3)=cmat(3,3)+1;end;
46 end
47 disp(cmat)
48
49 tot1s=cmat(1,1)+cmat(2,1)+cmat(3,1);
50 tot2s=cmat(1,2)+cmat(2,2)+cmat(3,2);
51 tot6s=cmat(1,3)+cmat(2,3)+cmat(3,3);
52 totall=tot1s+tot2s+tot6s;
53 disp([tot1s,tot2s,tot6s,totall])
54 accur1s=cmat(1,1)/tot1s;
55 accur2s=cmat(2,2)/tot2s;
56 accur6s=cmat(3,3)/tot6s;
57 accurall=(cmat(1,1)+cmat(2,2)+cmat(3,3))/totall;
58 disp([accur1s,accur2s,accur6s,accurall])

```

For bin=2, Fit<1.5, bin=1, and Fit>4, bin=6.

Command Window

New to MATLAB? See resources for [Getting Started](#).

```
>> HW6_classify_by_mlr
174    10

0.8331

43    19    0
26    57    2
0     0    27

69    76    29   174

0.6232    0.7500    0.9310    0.7299
```

fx >>

For bin=2, Fit<1.5, bin=1, and Fit>2.5, bin=6.

```
>> HW6_classify_by_mlr
174    10

0.8331

43    19    0
26    46    1
0     11    28

69    76    29   174

0.6232    0.6053    0.9655    0.6724
```

>>