

Assignment 13

Ivani Patel
11809154

Choose **RBFNetwork** -B 2 -S 1 -R 1.0E-8 -M -1 -W 0.1

Test options

☐ Use training set

☐ Supplied test set

☒ Cross-validation Folds

☐ Percentage split %

(Num) Class

Result list (right-click for options)

10:36:18 - functions.RBFNetwork

10:38:57 - functions.RBFNetwork

Classifier output

```
=== Run information ===

Scheme:      weka.classifiers.functions.RBFNetwork -B 2 -S 1 -R 1.0E-8 -M -1 -W 0.1
Relation:    one-five-1561-no name
Instances:   1561
Attributes:  3
              Intensity
              Symmetry
              Class
Test mode:   10-fold cross-validation

=== Classifier model (full training set) ===

Radial basis function network
(Linear regression applied to K-means clusters as basis functions):

Linear Regression Model

Class =

      1.9794 * pCluster_0_0 +
     -1.9789 * pCluster_0_1 +
      2.9884

Time taken to build model: 0.14 seconds

=== Cross-validation ===
=== Summary ===

Correlation coefficient      0.988
Mean absolute error         0.0442
Root mean squared error     0.2963
Relative absolute error     2.4103 %
```

Editor - C:\Users\ivani\OneDrive\Desktop\CPT_S 534\ass13.m

ass13.m

```
5  fit=Z(:, 2);
6  %disp ( [labels (1), fit (1) ])
7  cmat=zeros (2, 2);
8  for i=1:rows
9      class=labels (i);
10     bin=1;
11     if (fit (i)>3)bin=5; end;
12     if (bin==1&&class==1)cmat (1, 1)=cmat(1, 1) +1; end
13     if (bin==5&&class==1)cmat (2, 1)=cmat(2, 1) +1; end
14     if (bin==5&&class==5)cmat (2, 2)=cmat(2, 2) +1; end
15     if (bin==1&&class==5)cmat (1, 2)=cmat(1, 2) +1; end
16 end
17 disp(cmat)
18 tot1s=cmat(1, 1) +cmat(2, 1);
19 tot5s=cmat(2, 2) +cmat(1, 2) ;
20 totall=tot1s+tot5s;
21 disp ([tot1s, tot5s, totall])
22 accur1s=cmat(1,1)/tot1s;
23 accur5s=cmat(2, 2)/tot5s;
24 accurall= (cmat(1, 1) +cmat(2, 2))/totall;
25 disp ( [accur1s, accur5s, accurall])
```

Command Window

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

```
>> ass13
424      2

254      0
10     160

264     160     424

0.9621     1.0000     0.9764
```