Matlab Pattern Classification –1

Menu ->Help -> Product Help

Contents tab -> Statistics Toolbox -> **Classification**
   Check Discriminant Analysis
   Go to **classify**
      Study its syntax
      Study the description of *type, prior, class, err, coeff*
   See also **mahal**
   Search for **knnclassify**
      Study the description of *k, distance, rule*

Demos tab -> Statistics -> Multivariate Analysis -> **Classification**
   Copy and paste code
   Use **knnclassify** with *k*=1, 3, 5 instead of **classify**
   Study Decision Trees **treefit** and **treeval**

Demos tab -> Statistics -> Multivariate Analysis -> **Selecting Features for Classifying High-dimensional Data**
   Study "Loading the Data"
   Study "Dividing Data into a Training Set and a Test Set"
   Search for **cvpartition**
      Study `kfold, holdout, leavout, resubstitution`
   See also **crossval**
      Do the demo of classify using **crossval**

```
load fisheriris
fun = @(xT,yT,xt,yt)(sum(~strcmp(yt,classify(xt,xT,yT))));

rate = sum(crossval(fun, meas(:,1:2), species)) / 150
```
Or
```
c = cvpartition(species,'k',10);
rate = sum(crossval(fun, meas(:,1:2), species, 'partition', c)) / sum(c.TestSize)
```