MATLAB ASSIGNMENT 16-12-2021   - : CHARVI JAIN(113)

1.Create
a decision tree for the iris data and see how well it classifies the irises
into species.
2.Visualize
the regions assigned to each species.
3.Compute re - substitution
error and cross validation error for decision tree.


```
untitled.m ×  +
1    load fisheriris % load the sample data
2    ctree = fitctree(meas,species); % create classification tree
3    %view(ctree) % text description
4    view(ctree,'mode','graph') % graphic description
5    t = fitctree(meas(:,1:2), species,'PredictorNames',{'SL' 'SW' });
6    [x,y] = meshgrid(4:.1:8,2:.1:4.5);
7    x = x(:);
8    y = y(:);
9    j = classify([x y],meas(:,1:2),species);
10   gscatter(x,y,j,'grb','sod')
11   dtResubErr = resubLoss(t)
12   cvt = crossval(t,'CVPartition',gcp);
13   dtCVErr = kfoldLoss(cvt)
```

```
Command Window

dtResubErr =

    0.1333


dtCVErr =

    0.3133
```