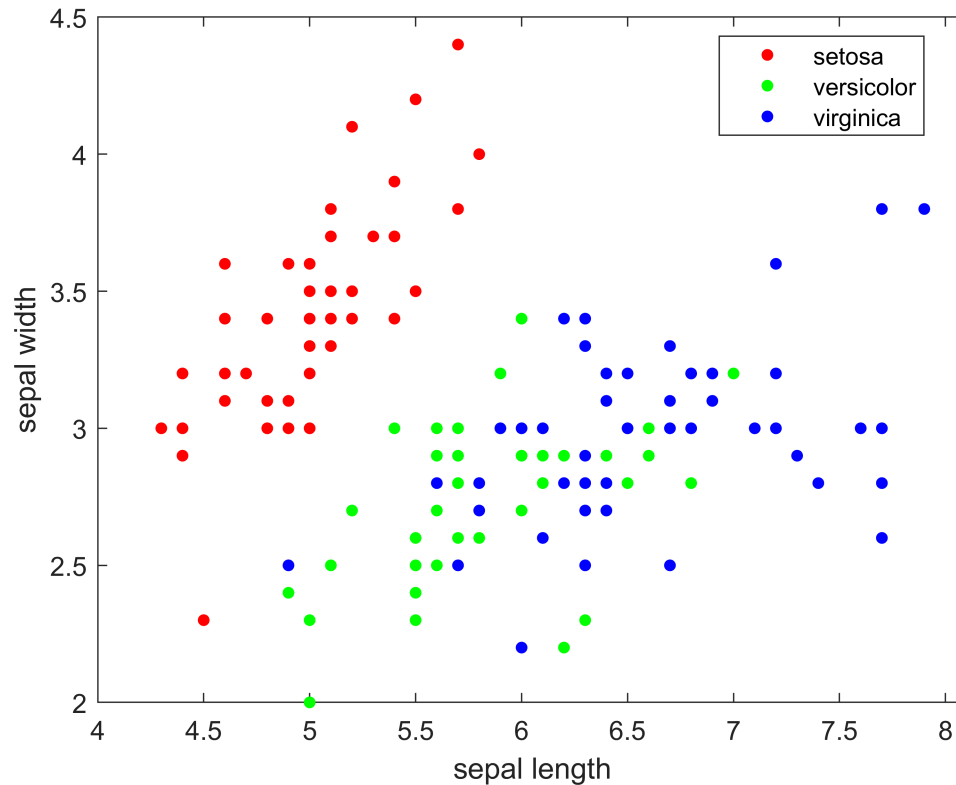```
load fisheriris
x = meas(:, 1:2);
y = categorical(species);
labels = categories(y);
gscatter(x(:, 1), x(:, 2), species, 'rgb');
xlabel('sepal length')
ylabel('sepal width')
```



```
noms_cl = {'Bayes', 'LDA', 'arbre decisio', 'kNN'}
```
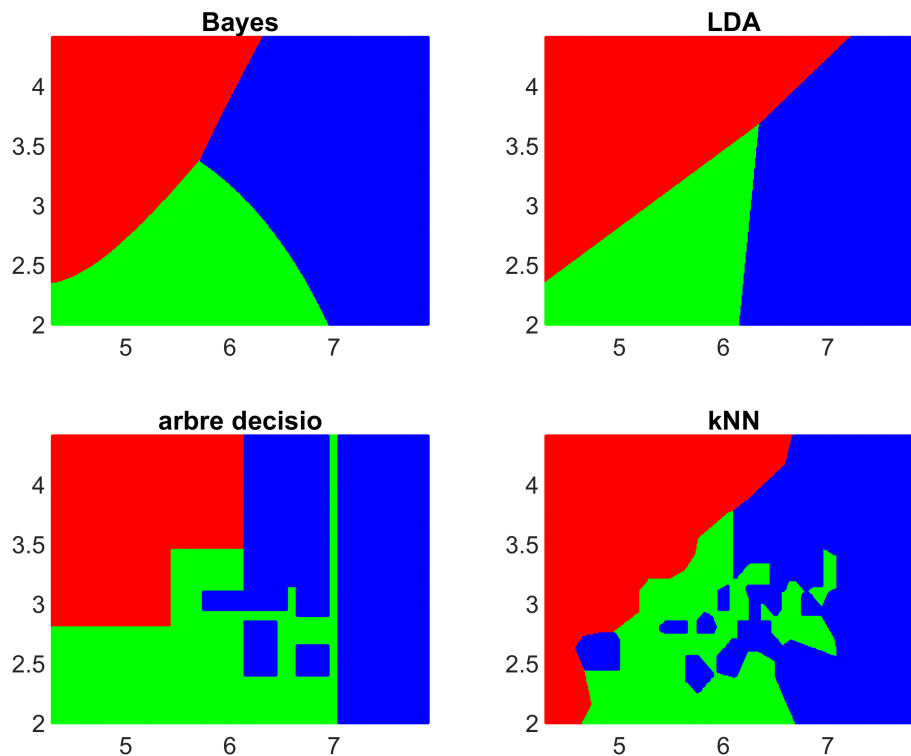
```
noms_cl = 1×4 cell array
    {'Bayes'}   {'LDA'}   {'arbre decisio'}   {'kNN'}
```

```
clssf{1} = fitcnb(x, y);
clssf{2} = fitcdiscr(x, y);
clssf{3} = fitctree(x, y);
clssf{4} = fitcknn(x, y);
x1rang = min(x(:, 1)):.01:max(x(:, 1));
x2rang = min(x(:, 2)):.01:max(x(:, 2));
[xx1 xx2] = meshgrid(x1rang, x2rang);
grid = [xx1(:) xx2(:)];
figure
for i = 1:4
    pred = predict(clssf{i}, grid);
    subplot(2, 2, i);
    gscatter(xx1(:), xx2(:), pred, 'rgb');
```

```
    title(noms_cl{i});
    legend off, axis tight
end
```



```
clssf{1} = fitcnb(meas, y);
clases1 = resubPredict(clssf{1});
error1 = resubLoss(clssf{1})
```

```
error1 = 0.0400
```

```
[CM, ordre] = confusionmat(y, clases1)
```

```
CM = 3×3
    50     0     0
     0    47     3
     0     3    47
ordre = 3×1 categorical array
     setosa
     versicolor
     virginica
```

```
clssf{2} = fitcdiscr(meas, y);
clases2 = resubPredict(clssf{2});
error2 = resubLoss(clssf{2})
```

```
error2 = 0.0200
```

```
[CM, ordre] = confusionmat(y, clases2)
```

```
CM = 3×3
    50     0     0
     0    48     2
     0     1    49
ordre = 3×1 categorical array
     setosa
     versicolor
     virginica
```
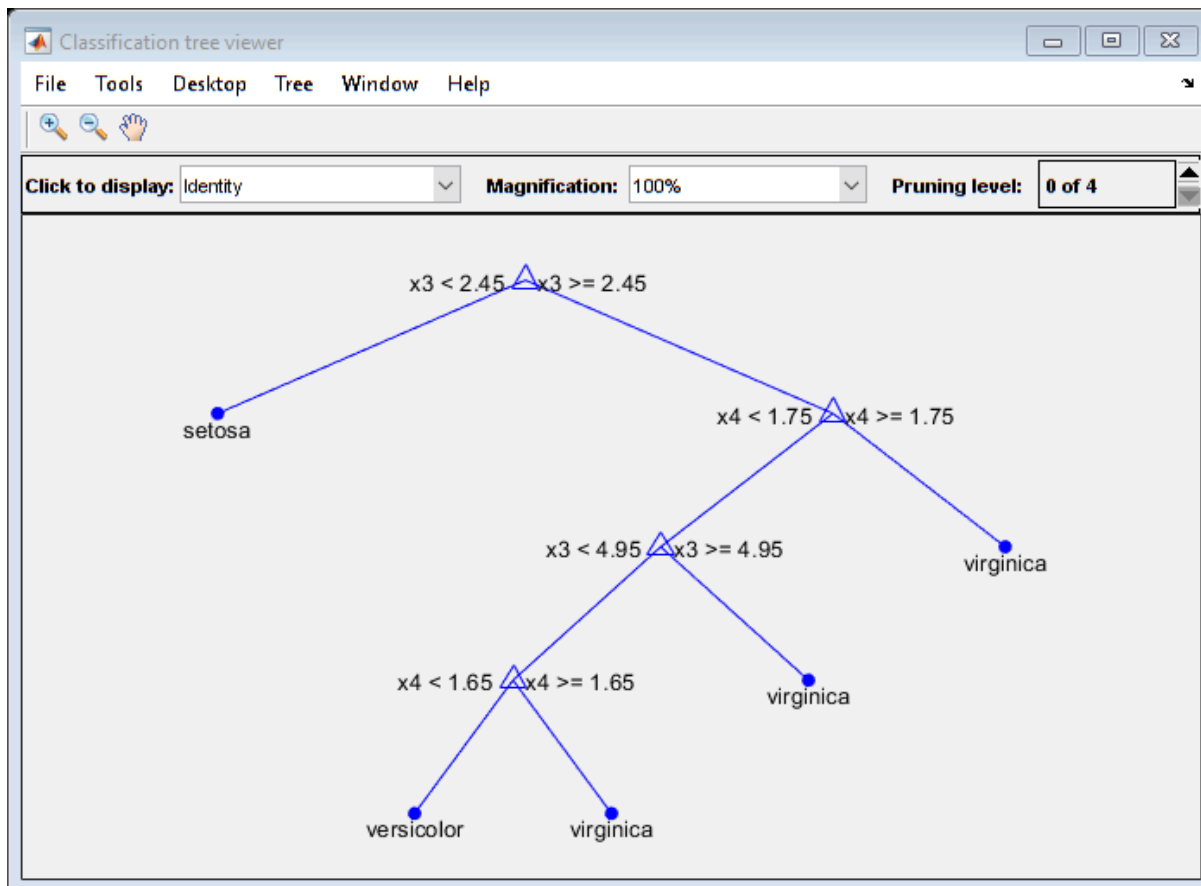
```
clssf{3} = fitctree(meas, y);
clases3 = resubPredict(clssf{3});
error3 = resubLoss(clssf{3})
```

```
error3 = 0.0200
```

```
[CM, ordre] = confusionmat(y, clases3)
```

```
CM = 3×3
    50     0     0
     0    47     3
     0     0    50
ordre = 3×1 categorical array
     setosa
     versicolor
     virginica
```

```
figure, view(clssf{3}, 'Mode', 'graph')
```

File   Tools   Desktop   Tree   Window   Help

Click to display: Identity   Magnification: 100%   Pruning level: 0 of 4

x3 < 2.45 ⟋⟍ x3 >= 2.45

setosa

x4 < 1.75 ⟋⟍ x4 >= 1.75

x3 < 4.95 ⟋⟍ x3 >= 4.95

virginica

x4 < 1.65 ⟋⟍ x4 >= 1.65

virginica

versicolor   virginica

```
clssf{4} = fitcknn(meas, y);
clases4 = resubPredict(clssf{4});
error4 = resubLoss(clssf{4})
```

error4 = 0

```
[CM, ordre] = confusionmat(y, clases4)
```

CM = 3×3
    50   0   0
     0   50   0
     0   0   50

ordre = 3×1 categorical array

    setosa
    versicolor
    virginica