# CMPE 452 Assignment 1 - Tool

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# Import Data

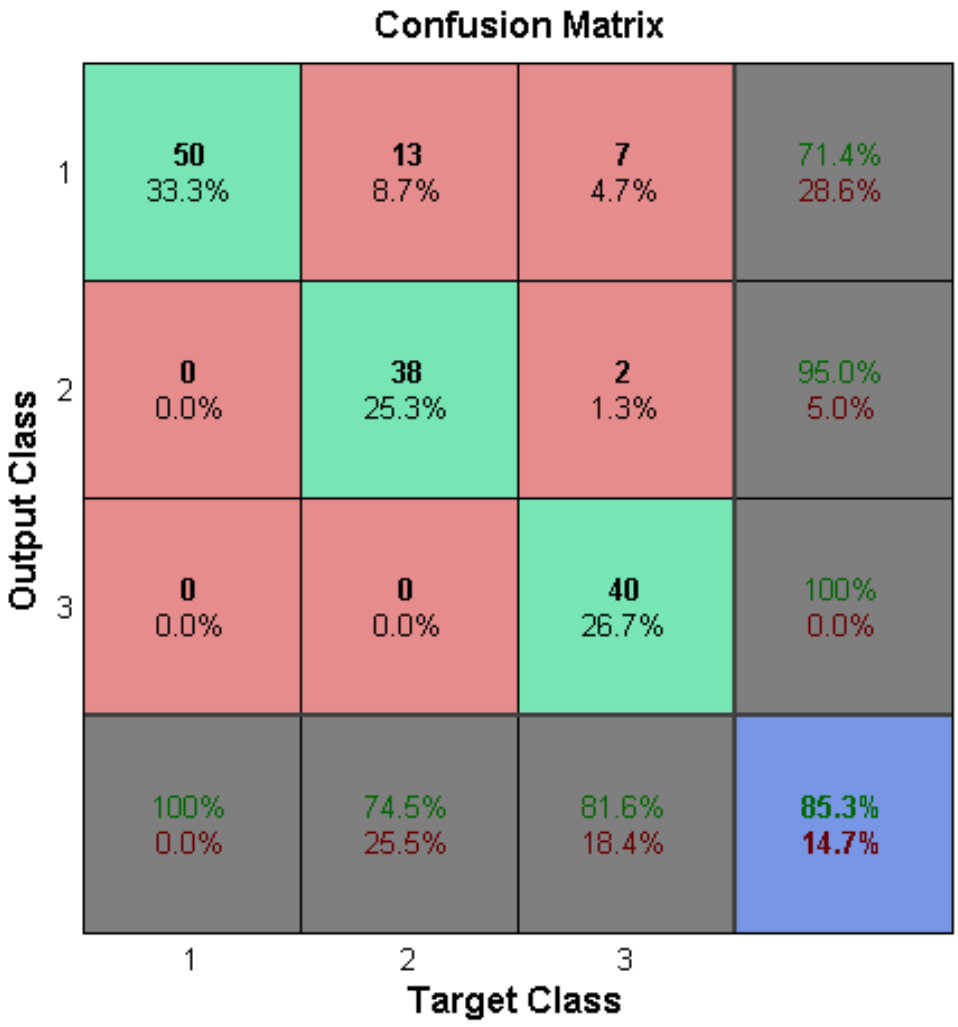
```
%[trainRawIn, trainRawOut] = xlsread('data/train.xlsx');
%[testRawIn, testRawOut] = xlsread('data/test.xlsx');
trainExp = zeros(length(trainRawOut),3); % Initializing the expected output array
testExp = zeros(length(testRawOut),3); % Initializing the expected output array
```

# Create all necesaccy vectors

```
for i=1:length(trainExp) %Training output vector
    if strcmp(trainRawOut(i),'Iris-setosa')
        trainExp(i,1) = 1;
    elseif strcmp(trainRawOut(i),'Iris-versicolor')
        trainExp(i,2) = 1;
    elseif strcmp(trainRawOut(i),'Iris-virginica')
        trainExp(i,3) = 1;
    end
end
for i=1:length(testExp) % test output vector
    if strcmp(testRawOut(i),'Iris-setosa')
        testExp(i,1) = 1;
    elseif strcmp(trainRawOut(i),'Iris-versicolor')
        testExp(i,2) = 1;
    elseif strcmp(trainRawOut(i),'Iris-virginica')
        testExp(i,3) = 1;
    end
end
x = [trainRawIn; testRawIn]';
t = [trainExp; testExp]';
net = patternnet(5);
[net,tr] = train(net,x,t);
testX = x(:,tr.testInd);
testT = t(:,tr.testInd);
testY = net(x);
testClasses = testY > 0.5;
accuracy=sum(testClasses(1,:)==t(1,:))/150
plotconfusion(testClasses,t)
```

```
accuracy =
```

*1*

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