Publish tscu_tutorial.m in PDF and HTML format for displaying on the web site.

```
%publish('tscu_tutorial.m','format','pdf' ,'outputDir','../doc/pdf');
%publish('tscu_tutorial.m','format','html','outputDir','../doc/html');
%publish('tscu.m','format','html','outputDir','../doc/html');
close all
```

Tuning soft margin parameter of SVM

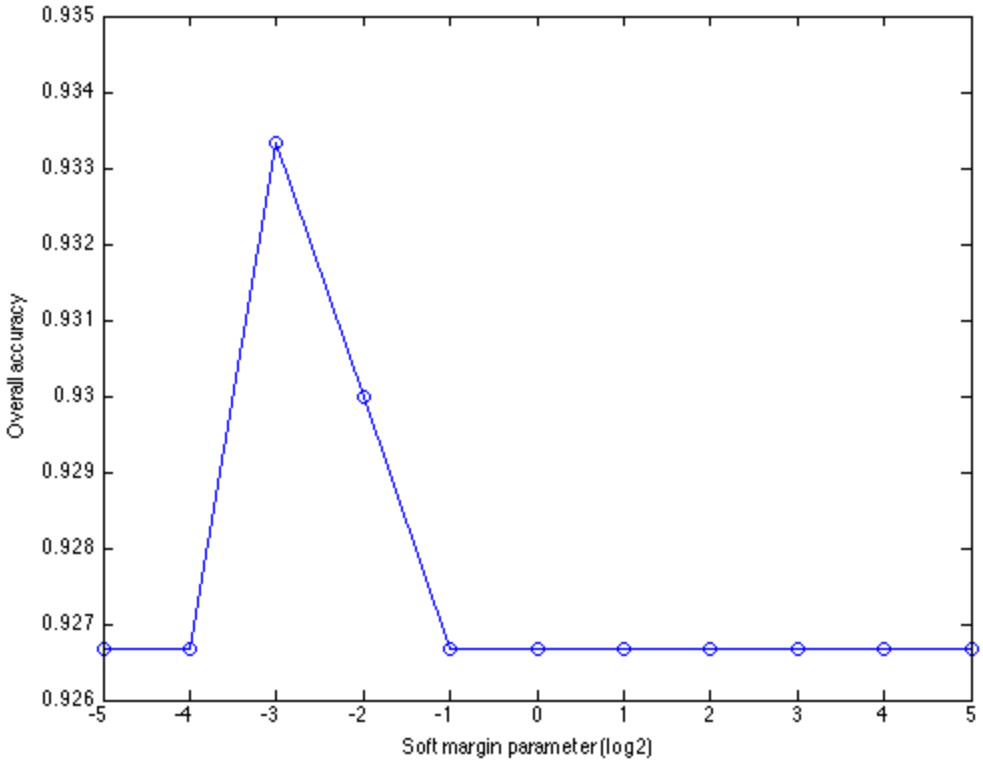
Like many other machine learning algorithms, SVM has also some parameters that controls the details of the algorithm. The most well known parameter is the soft margin parameter; usually denoted by C. It is very useful for the cases where it is impossible to obtain a separating hyperlane without any misclassification. Setting C to a non-zero value, you basically give some flexibility to SVM. In doing so, SVM is allowed to make some errors. Increasing the soft margin parameter give higher flexibility. For further information, you can take a look at Cortes, C.;Vapnik, V. (1995), "Support-vector networks". Machine Learning 20 (3): 273 doi:10.1007/BF00994018

The default soft margin parameter is 8 in TSCU. You can change it by using `SVMSoftMargin` option. Here I will try 11 different parameters and plot the resulting classification accuracies. It is common to try powers of 2, so I will follow the general trend. The parameters that I used are C={2^i | i=-5,...,5}

```
margins=2.^(-5:5);
accuracies=zeros(1,numel(margins));
for i=1:length(margins)
    out=tscu(trn,tst,'Classifier','SVM','SVMSoftMargin',margins(i),...
        'LogLevel','Alert');
    accuracies(i)=out.perf.OA;
end
```

Then I will run tscu in silent mode (remember the `LogLevel` option), collect the accuracies and plot them.

```
plot(log2(margins),accuracies,'o-');
xlabel('Soft margin parameter (log2)');
ylabel('Overall accuracy');
```



Here are the classificaton accuracies over different soft margins. As you see, the

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