**Ex2 Due January 31, 2011**

* Become familiar with the Neural Network Toolbox in Matlab
* You are given a data set with 4 variables and a dependent variable (regression)
* Using cross validation techniques, seek best architecture and best prediction.
* Train a BP RBF and SVM networks and compare.
* Provide graphs of training and testing error as a function of training time and number of hidden units. Use every second point as test.
* **Discuss the results, justify with graphs and provide clear understanding, in particular, discuss, BIAS & VARIANCE of the networks (Think of ways to show that and justify your arguments**
* Remember to use cross validation, weight decay, and momentum and discuss their effect.
* (Bonus) Demonstrate the effect of ensembles.
* How would you estimate the bias and variance of the architecture?

**To read the data use**

data = xlsread('trp\_a.csv');

XX = data(:,1:4); tr = 1:2:size(XX,1)-1; ts = tr+1;

yy = data(:,5); train\_d = XX(tr,:); test\_d = XX(ts,:);