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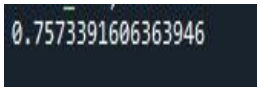
Assignment #4 Support Vector Machines

Problem #1:

- classification accuracy of SVM using not-scaled data sets -on the test examples averaged over ten runs -is:



- classification accuracy of SVM using scaled data sets is:

- Difference between them:

➢ In general, the main advantage of scaling over non-scaling is to avoid attributes in greater numeric ranges dominating those in smaller numeric ranges and may neglect their effect, thus in linear SVM the margin will increase and the mis-classification will also decrease.

➢ Another advantage is to avoid numerical difficulties during the kernel calculation >> time processing will reduce.

➢ But in this case, the accuracy before and after scaling the data was not affected much, maybe because the number of data samples is small. So accuracy did not differ much.