

# IE 583 Homework 4

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*This homework assignment is due on Tuesday, April 17<sup>th</sup>, by the end of the day (midnight).*

## **Advanced Classification**

In this assignment you will again revisit the German Credit data from homework 1 and 3. The objective is to improve the classification via use of two advanced classification algorithms: random forest and support vector machines.

Specifically, I would like you to consider are the following:

- Use R and the caret package to tune, train and evaluate RF and SVM models
- Tune the models by adjusting the parameters. Use you're own search grids that you justify.
- Compare the performance of the new models with each other and those obtained using decision trees, naive bayes and k-NN.

As always, make sure that you are using appropriate techniques for evaluating the error and incorporate your input engineering results from homework 3 as appropriate.