Exercise 8 - Machine Learning II - 2016

Please send your submissions (runnable code, plots and written answers) **to becker@ccc.cs.uni-frankfurt.de
until Tuesday June 22nd 2016**. One submission per student. Prepare to present your solutions in the
exercise session. Students that are not able to explain their solutions may not be given credit on their
submissions.

1 Incremental fitting, boosting, random forests (10 Points)

- How does the incremental fitting procedure promote sparsity?

- Is the procedure of incremental fitting optimal? If not, why?

- Describe boosting in no more than five sentences.

- Why is the relative importance of datapoints changed during boosting?

- What is the "Random" in a Random Classification Tree?

- How would you choose the families of possible functions $q[x]$ in training a Random Classification Tree?

- How is the log likelihood maximized in training a Random Classification Tree.

- What benefits does a Random Forest classifier have on multi-core systems?

- What are commonalities/differences of Adaboost and logitboost?

- How can you use Support Vector Machines in Multi-Class classification problems?