Analysis Centre Statistics School 2014 Hamburg Multivariate Analysis Tutorial session – Part E

5 TMVA Exercise – Optional Classification

This is an optional exercise, either because you were so quick, or you simply want to look more into classification.

The problem revolves around three dimensional data, which is more complicated than the examples before. The signal has a complex shape with non-linear correlations. The background is flat. Your goal is to find the best possible classification, as measured by the area under the ROC curve.
The data file is `classificationTestData.root`.

As with the regression example, please form groups of at least three people. Please pick one of the following methods to work on.

- Likelihood

- Multi Layer Perceptron (MLP)

- Boosted Decision Trees (BDT)

If more than one group wants to work on this exercise, you can choose different methods and later compare your results.

Hints:

- This exercise does not run out of the box, you need to modify several things to make it work.

- Take a close look at the signal and the background in the file

- Use the macro `TMVAClassificationExample.C` and modify it!

- For visual aid, use the macro `TMVAGui.C`