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TMVA – Toolkit for Multivariate Data Analysis with ROOT

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The use of machine learning techniques for the mining of data from high-energy physics experiments has become more and more popular in recent years. The machine learning techniques themselves have significantly evolved, also driven by developments in other areas in and outside science. TMVA is a toolkit (integrated in ROOT) which implements a large variety of sophisticated multivariate classification
algorithms ranging from rectangular cut optimisation using genetics algorithm and likelihood estimators, over linear and non-linear discriminants (neural networks) to more recent developments like boosted decision trees and rule ensemble fitting. TMVA allows the simultaneous training, testing and evaluation of all these classifiers.

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