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StatPatternRecognition: A C++ Package for Multivariate Classification

Monday, September 3, 2007 8:00 AM (20 minutes)

SPR implements various tools for supervised learning such as boosting (3 flavors), bagging, random forest, neural networks, decision trees, bump hunter (PRIM), multi-class learner, logistic regression, linear and quadratic discriminant analysis, and others. Presented at CHEP 2006, SPR has been extended with several important features since then. The package has been stripped of CLHEP dependency, equipped with autotools and posted at Sourceforge for distribution under general public license: <http://sourceforge.net/projects/statpatrec/> . It is now a standalone package with an optional dependency on Root for data input/output. Several new methods have been included in the package. SPR is now capable of boosting and bagging an arbitrary sequence of included classifiers allowing the user to explore a broad range of classifier combinations. This talk is meant to summarize recent updates to the package and review recent applications of the package to physics analysis. More info on the project is available from <http://www.hep.caltech.edu/~narsky/spr.html> .

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