Contribution ID: **519**   Type: **Poster**

pyhf: a pure Python implementation of HistFactory with tensors and autograd

Tuesday, November 5, 2019 4:15 PM (15 minutes)

The HistFactory p.d.f. template [CERN-OPEN-2012-016] is per-se independent of its implementation in ROOT and it is useful to be able to run statistical analysis outside of the ROOT, RooFit, RooStats framework. pyhf is a pure-python implementation of that statistical model for multi-bin histogram-based analysis and its interval estimation is based on the asymptotic formulas of "Asymptotic formulae for likelihood-based tests of new physics" [arxiv:1007.1727]. pyhf supports modern computational graph libraries such as TensorFlow and PyTorch in order to make use of features such as autodifferentiation and GPU acceleration.

Consider for promotion

Yes

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