Contribution ID: **24**   Type: **Oral Presentation**

pyhf: a pure Python statistical fitting library from the high energy physics community with tensors and autograd

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The HistFactory p.d.f. template
$href https://cds.cern.ch/record/1456844$[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"
$href https://arxiv.org/abs/1007.1727$[arxiv:1007.1727]. pyhf supports modern computational graph libraries such as TensorFlow and PyTorch in order to make use of features such as auto-differentiation and GPU acceleration.

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