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Extending Unfolding Methods With Machine Learning

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Correcting experimental measurements for detector effects, or unfolding, is a standard technique used at the LHC to report multi-differential cross section measurements. These techniques rely on binned data and are limited to low dimensional observables. In this talk, I will cover recent ideas to extend standard methods of unfolding using machine learning, enabling the measurements of unbinned and high-dimensional differential cross sections. These include methods using classifiers as approximators to the likelihood ratio, generative models, and high dimensional interpolation techniques.

Primary Field of Research

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