

Generative Unfolding of Jets and Their Substructure

Unfolding, for example of distortions imparted by detectors, provides suitable and publishable representations of LHC data. Many methods for unbinned and high-dimensional unfolding using machine learning based have been proposed, but no generative method has been shown to scale to the several hundred dimensions necessary to fully characterize LHC collisions. This project proposes a new generative unfolding framework that is capable of unfolding several hundred dimensions. It is shown to be effective to unfold the full substructure of light-flavor jets and of top jets. This is the first generative unfolding study to achieve high precision on high-dimensional jet substructure.

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