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Deep-learned top taggers using Lorentz invariance

Monday 7 May 2018 14:30 (15 minutes)

Recent advances in machine learning have made it possible for convolutional neural networks to be applied to classifying boosted jets as either signal (be that tops, Ws or Higgses) or QCD background. These techniques have shown comparable and even superior performance to QCD-based taggers, although have typically relied on constructing 2D 'images'of the jets. In this talk, I discuss a new, more physics-motivated approach, where the four-momenta of the jet constituents are used directly as inputs for the network, and highlight the advantages of this approach over the usual jet images method.

Summary

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Session Classification: Top