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Deep(Boosted)Jet: Boosted jet identification using particle-level convolutional neural networks (15'+5')

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dentification of boosted top quarks from their hadronic decays can play an important role in searches for new physics at the LHC. We present DeepBoostedJet, a new approach for boosted jet identification using particle-flow jets at CMS. One dimensional convolutional neural networks are utilized to classify a jet directly from its reconstructed constituent particles. The new method shows significant improvement in performance compared to alternative multivariate methods using jet-level observables.

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