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Machine Learning for Muon Identification at LHCb

Particle identification is a key ingredient of most of LHCb results. Muon identification in particular is used at every stage of the LHCb triggers. The objective of the muon identification is to distinguish muons from the rest of the particles using only information from the Muon subdetector under strict timing constraints. We use state-of-the-art gradient boosting algorithm and real data with sWeights to train such a model. In this talk we present the algorithm along with evaluation of its performance across momentum spectrum and different background sources.

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