

Machine learning at LHCb

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Machine learning methods are widely used in the LHCb experiment at every stage of data processing. This talk will cover some of the established applications of machine learning, such as the classification and selection of interesting events in triggering and offline analysis of the data, such as particle identification, unbiased offline characterization of reconstructed events, tracking, and data quality assessment. We will also discuss ongoing and future developments, including challenges of dealing with the luminosity increase and the migration to a pure software trigger, which is planned for LHC Run III, as well as the application of Generative Adversarial Networks to fast detector simulation.

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