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Predicting the missing transverse momentum trigger rate at ATLAS with machine learning

Thursday 17 March 2022 18:40 (20 minutes)

One of the challenges of the ATLAS missing transverse momentum trigger is understanding how the trigger rate will evolve with the number of proton collisions per bunch crossing, or pileup. In the past, the data have been fit to parametric functions and extrapolated to higher pileup values. In this poster, we present a new technique using machine learning regression models to describe the trigger rate, and allow for extrapolation to higher values of pileup.

Career stage

Undergraduate student

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