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Columnar analysis

Monday 9 October 2023 13:30 (2 hours)

This exercise introduces the basics of columnar data analysis in the Python Scientific Ecosystem using the nanoAOD data format used by CMS. Columnar analysis here means processing high energy physics data in a vectorized way, giving potentially large speedups compared to traditional loop-based computing. The students will use the Python packages awkward, uproot and coffea to read and explore a nanoAOD event file, understand its format as well as its documentation, compute high-level variables, select events with simple cuts, as well as fill and plot histograms of the events.

Presenter: JEPPE, Laurids (CMS (CMS Fachgruppe TOP))

Session Classification: Topical exercises