

Towards detector agnostic Fast Simulation

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Recently, there have been numerous machine learning-based models developed to address the need for fast calorimeter shower simulation tools. However, most of these models are detector-dependent, i.e., these models are separately trained for each detector or experiment. This leads to the consumption of considerable resources during the designing and training of these models, both in terms of compute and manpower. In this poster, we present preliminary results for a transformer-based diffusion model that is trained on multiple detectors and can be adapted to a new detector with a significant reduction in the training time (up to 25x) and data (less than 50%).

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