

HIPSTER - a python package for particle physics analyses

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HIPSTER (Heavily Ionising Particle Standard Toolkit for Event Recognition) is an open source Python package designed to facilitate the use of TensorFlow in a high energy physics analysis context. The core functionality of the software is presented, with images from the MoEDAL experiment Nuclear Track Detectors (NTDs) serving as an example dataset. Convolutional neural networks are selected as the classification algorithm for this dataset and the process of training a variety of models with different hyperparameters is detailed. Next the results are shown for the MoEDAL problem demonstrating the rich information output by HIPSTER that enables the user to probe the performance of their model in detail.

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