

Data Science in High Energy Physics

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High Energy Physics is a big data task that requires modern data science tools for storage, processing and analyzes. In this contribution we aim to overview the applications of machine learning, namely the modern deep learning approach, to aid research in collider physics and related topics. More specifically we will show how Convolutional Neural Networks can help us learn about new observables for jet physics and other Artificial Neural Networks are becoming the new the paradigm for data analysis at the Large Hadron Collider. Due to the complexity of the task and volume of the data used these neural networks are implemented in Keras using Tensorflow and trained on high performant Graphical Processing Units.

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