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Machine Learning for Parton Distribution Functions

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The NNPDF collaboration has been using Machine Learning techniques to solve the inverse problem of extracting Parton Distribution Functions from finite sets of experimental data for almost two decades. With the increased precision of the LHC measurements, It has become mandatory to understand the robustness of the error bars and of the correlations in the results of PDFs fit. We review the fitting procedure from a Bayesian perspective and discuss the training of neural networks in a Bayesian framework.

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