

AI in HEP: Current Methods and Applications

Wednesday, July 14, 2021 10:30 AM (30 minutes)

In recent years, Machine Learning (ML) and Artificial Intelligence (AI) methods have become ubiquitous in High Energy Physics research. Though initial implementations of ML for HEP focused mainly on supervised learning for classification problems like jet tagging or event selection, HEP researchers are increasingly employing cutting edge techniques for a wide range of applications and even contributing to advances in the field of ML and AI. This talk will describe current ML methods being studied for a range of HEP use cases including data collection, reconstruction, tagging, simulation, and inference; methods discussed will include geometric machine learning, deep learning, unsupervised and weakly supervised models, and more.

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