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Anomaly Awareness for BSM Searches at the LHC

Friday 23 October 2020 16:55 (20 minutes)

n this talk we present a new algorithm called 'Anomaly Awareness'(AA) to search for physics beyond the standard model (BSM). By making the algorithm aware of the presence of a range of different anomalies, we improve its capability to detect anomalous events, even those it had not been exposed to. As an example, we apply this method to a boosted jet topology for BSM searches at LHC and use it to uncover new resonances or EFT effects (based on arXiv:2007.14462 [cs.LG]). We will discuss AA implementation using CNNs and VAEs.

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