PHYSTAT - Statistics meets ML



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ML in Particle Physics

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Machine learning and AI have quickly turned into indispensable tools for modern particle physics. They both greatly amplify the power of existing techniques - such as supercharging supervised classification - and enable qualitatively new ways of extracting information - such as anomaly detection and likelihood-free inference. Accordingly, the underlying statistical machinery needs to be understood in greater detail or in some cases newly developed.

After briefly introducing the environment of collider based particle physics, this talk will review key developments in machine learning applied to data analysis with a special eye on statistical challenges.

Primary Field of Research

Presenter: KASIECZKA, Gregor (Hamburg University (DE)) **Session Classification:** Talks