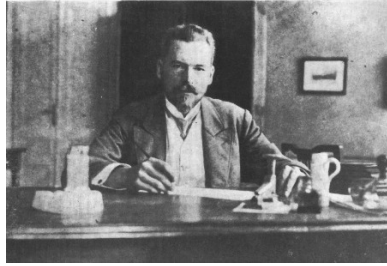


36th M. Smoluchowski Symposium on Statistical Physics: Soft Matter, Information Processing and Nonequilibrium Fluctuations



Contribution ID: 14

Type: **Regular Talk**

Noise management in Machine Learning

Monday, September 25, 2023 4:40 PM (25 minutes)

Noise can significantly impact Machine Learning performance, both in real-world data and due to adversarial attacks. Our method aims to mitigate the effect of noise by introducing data abstractions, which reduce the impact of noise but may result in some loss of information and accuracy. The poster explores various approaches to abstractions for numerical data and binary classification tasks. Experiments compare the performance of random forest, logistic regression, support vector machine and artificial neural network using raw and abstracted data. We also extensively studied the robustness to noise in the case of artificial neural network.

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Session Classification: Session 5