

BERNOULLIS TAFELRUNDE

GRADUATE STUDENT SEMINAR

Monday, 27 March 2023, 12:15-13:00
Seminarraum 05.002, Spiegelgasse 5

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Normalizing flows for density estimation and sampling

ABSTRACT

Longstanding goals of statistics and machine learning have been to model a probability distribution from its samples and, viceversa, to learn how to sample from a given distribution. Normalizing flows are powerful machine learning models that allow to perform both tasks in an efficient and exact way. This is achieved by defining an expressive probability distributions by transforming a simple base distribution through a series of bijective transformations, which give a great flexibility in the choice of model design. In this talk we aim to review normalizing flows in the light of probabilistic modeling and inference while analyzing the fundamental principles, expressive power, computational trade-offs, and different architectures.