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# **Information Theory and Machine Learning**

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Deadline for manuscript submissions: closed (28 February 2022)

### **Message from the Guest Editors**

There are a number of significant steps in the development of machine learning that benefit from information theoretic analysis, as well as the insights into information processing that it brings. we hope to have a holistic view of data processing, to work with high-dimensional data and inaccurate statistical models, to incorporate domain knowledge, to provide performance guarantees, robustness, security, and fairness, to reduce the use of computational resources, to generate reusable and interpretable learning results, etc.

The goal of this Special Issue is to collect new results in using information theoretic thinking to solve machine learning problems, as well as new methods and new concepts which might not have been fully developed or might not have the most compelling set of supporting experimental results.









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### **Editor-in-Chief**

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### Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

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