Special Issue

Information Theory for Data Science, AI and Machine Learning

Message from the Guest Editors

Data science, artificial intelligence (AI), and machine learning are rapidly evolving fields that focus on extracting insights and making decisions based on complex, high-dimensional, and often noisy data.
In recent years, there has been growing interest in the application of information theoretic tools to better understand and advance core challenges in data science, AI, and machine learning. Information theory offers a principled framework for analyzing uncertainty, complexity, generalization, data efficiency, and communication, all of which are central to modern algorithmic systems.
This Special Issue invites original and unpublished contributions that explore theoretical foundations, novel methodologies, and practical implementations of information theory in the context of data science, AI, and machine learning. We particularly encourage work that bridges theory and practice and demonstrates how information theoretic insights can inform the design, analysis, and deployment of intelligent systems.

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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.
Entropy is an online open access journal providing an advanced forum for the development and/or application of entropic and information-theoretic studies in a wide variety of applications. *Entropy* is inviting innovative and insightful contributions. Please consider *Entropy* as an exceptional home for your manuscript.

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