Interpretable Statistical Machine for Decision Making: Modeling, Learning and Application Perspectives

Message from the Guest Editors

Machine learning (ML) algorithms are powerful tools used in making decisions and predictions in real-world complex systems, including medical diagnoses, the spread of infectious diseases, financial modelling and insurance pricing. However, in most cases, these algorithms do not provided explanations for how they reach the results and have a barrier preventing the achievement of a broader adaptation of machine learning or, more generally, artificial intelligence (AI) technologies in decision-making problems. This Special Issue aims to collect outstanding research papers on building statistical or computational models that can provide sufficient interpretability for decision-making problems. The application domains may include computational intelligence, engineering, business and economics. Both theoretical development and applied work addressing the interpretability of models for decision making in a broader sense are welcome.

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Deadline for manuscript submissions

closed (31 December 2023)

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