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Complexity of concept classes induced by discrete Markov networks and Bayesian networks

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Highlights

- We show that VC dimension, Euclidean dimension and dimension of the toric ideal corresponding to a nontrivial discrete MN are identical.
- One can compute VC dimension of the concept class induced by a discrete MN in terms of a computer algebra system directly based on our results.
- For a general BN, we show that dimension of the corresponding toric ideal offers an upper bound of Euclidean dimension.

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