Towards a logical model of induction from examples and communication

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Abstract
This paper focuses on a logical model of induction, and specifically of the common machine learning task of inductive concept learning (ICL). We define an inductive derivation relation, which characterizes which hypothesis can be induced from sets of examples, and show its properties. Moreover, we will also consider the problem of communicating inductive inferences between two agents, which corresponds to the multi-agent ICL problem. Thanks to the introduced logical model of induction, we will show that this communication can be modeled using computational argumentation.

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