

Reading on AI: Knowledge Representation: Answer Set Programming at a Glance

First of all one of the main problem/advantage that I could note in the article is that with propositional logic we need already before starting the analysis of the case by various method (Horn, De Morgan's laws, normal law, distribution, Commutativity/association, CNF..) we need a solid base of the basic state. While in some cases the state is already little varied. (Let's imagine the state of hunger of a person along the day it will not be necessarily the same at the beginning as at the end of the day and therefore the state and the proposals that we realize would be true only at a moment T). This is necessarily a disadvantage on the long term since the variables can/will change. But on the short term/moment itself it is very interesting. Since the complexity of these algorithms are in general very fast. For example for Horn's we are at $O(N)$. This allows to reduce the calculation time and therefore the response time. But also it allows to realize calculation on a lot of domain. In the example of the article we talk about music, data science, industrial application... This is also one of its greatest strengths.

To conclude we can say that propositional logic allows to solve many problems in various domains but that it is strongly dependent on data.