

Logical Algorithmics: From Theory to Practice

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Abstract

The standard approach to algorithm development is to focus on a specific problem and develop for it a specific algorithm. Codd's introduction of the relational model in 1970 included two fundamental ideas: (1) Relations provide a universal data representation formalism, and (2) Relational databases can be queried using first-order logic. Realizing these ideas required the development of a meta-algorithm, which takes a declarative query and executes it with respect to a database. In this talk, I will describe this approach, which I call Logical Algorithmics, in detail, and explore its profound ramification.

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