

Invited Talk

It's time for a semantic engine

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Abstract

A common computational goal is to encapsulate the modeling of a target phenomenon within a unified and comprehensive "engine", which addresses a broad range of the required processing tasks. This goal is followed in common modeling of the morphological and syntactic levels of natural language, where most processing tasks are encapsulated within morphological analyzers and syntactic parsers. In this talk I suggest that computational modeling of the semantic level should also focus on encapsulating the various processing tasks within a unified module (engine). The input/output specification of such engine (API) can be based on the textual entailment paradigm, which will be described in brief and suggested as an attractive framework for applied semantic inference. The talk will illustrate an initial proposal for the engine's API, designed to be embedded within the prominent language processing applications. Finally, I will sketch the entailment formalism and efficient inference algorithm developed at Bar-Ilan University, which illustrates a principled transformational (rather than interpretational) approach towards developing a comprehensive semantic engine.