



Bachelor's or Master's Thesis

at the Institute of Artificial Intelligence

Evaluation of Stream Reasoning Systems

Description

In order to realize intelligent systems, their knowledge about the world has to be formalized to draw further conclusions. Because intelligent systems usually reside in dynamic environments, a recent research trend is stream reasoning, where conclusions are not just drawn from the relatively static data in a database, but from streams of data. For stream reasoning systems, there are no standardized query languages or semantics. Hence, the results of queries can diverge greatly between different systems and also the system's capabilities are not necessarily identical. As part of the thesis, the semantics and the supported query languages of different stream reasoning systems are to be compared. Furthermore, one can examine to what extent the semantics of the systems comply with each other. This comparison can be based on existing benchmarks or on self-developed test cases.

Tasks

- Theoretic und practical comparison of different stream reasoning systems
- Analysis of existing benchmarks and development of test cases

Requirements

Some knowledge of Semantic Web technologies such as SPARQL or Description Logics/OWL is required. Experience with Java is needed for working with the existing systems and benchmarks.

Further thesis offers are available at the institute's website at <http://www.uni-ulm.de/in/ki.html>.

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