ONTObOLOGY-BASED DATA INTEGRATION

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Outline

In this seminar we will review the current state of the art in ontology-based data integration, which is an approach for performing the integration of heterogeneous data sources by means of using ontologies as global views over the heterogeneous schemas of the original data sources. Data sources may be available in varied formats, including relational databases, spreadsheets, NoSQL databases, data streams, REST APIs, etc., and organised according to different schemas. We will specially focus on the research and implementation work that has been done at the Ontology Engineering Group on this topic, describing how it has been applied for real-world problems and discussing about open challenges.

Syllabus

1. Ontology-based data integration. Introduction
2. The W3C R2RML and Direct Mapping recommendations
3. Ontology-based data access to relational databases
4. Ontology-based data access to data streams
5. Query answering
6. Federated query processing in ontology-based data access contexts
7. Linked Data traversal for federated query evaluation
8. Open challenges

Assessment Method

Participation in the class plus a brief written discussion of open challenges.

Credits

0.5 ECTS

Remarks

For last minute information, consult the document.

Timetable

- 08 February, 15.00 - 18.00

Lecture Theatre

A-6201

Tuition Language

English.
Capacity:

50

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