



RDFox, a heavily optimised RDF triple store and parallel Datalog reasoner

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Audience

Physicians interested in ontology reasoning for health care, IT-Experts working for/in Healthcare

Objectives

Getting to know triples in RDF format. Getting a feeling for how (Datalog) ontologies work on RDF-Data. See what RDFox can do, how parallel evaluation works and why RDFox is an in-memory reasoner.

Abstract

RDF is a universal data format which is used with increasing popularity in Biomedical applications but recently also in Health Care applications. The data is stored in so called RDF triples, which can be using e.g. OWL 2 and its profiles to enrich this data with more information (reasoning). RDFox is an optimised triple store and Datalog/OWL 2 RL reasoner developed at the University of Oxford, which exploits modern parallel hardware architectures and scales exceptionally well. The talk will show how data is encoded into RDF and how a Datalog/OWL 2 RL ontology is used to infer more data. We shall present RDFox and provide a brief look under the hood.

References

[Parallel Materialisation of Datalog Programs in Centralised, Main-Memory RDF Systems](#) Boris Motik, Yavor Nenov, Robert Piro and Ian Horrocks, in: AAAI Publications, Twenty-Eighth AAAI Conference on Artificial Intelligence, 2014