

# Knowledge Extraction Based on Forgetting and Subontology Generation

DL Invited Talk Abstract

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## Keywords

Knowledge extraction, forgetting, description logics, ontologies

This presentation will give an overview of our ongoing work in developing knowledge extraction methods for description logic based ontologies. Because the knowledge is not only given by the axioms stated in an ontology but also by the knowledge that can be inferred from these axioms, knowledge extraction is a challenging problem. Forgetting creates a compact and faithful representation of the stored knowledge over a user-specified signature by performing inferences on the symbols outside this signature.


After an introduction of the idea of forgetting, an overview of our forgetting tools and some applications we have explored, I will discuss recent collaborative work with SNOMED International to create bespoke knowledge extraction software for the medical ontology SNOMED CT. The software creates a self-contained subontology containing definitions of a specified set of focus concepts which minimises the number of supporting symbols used and satisfies SNOMED modelling guidelines. Such subontologies make it easier to reuse and share content, assist with ontology analysis, and querying and classification is faster. The talk will give an overview of this research spanning several years, focussing on key ideas, findings, practical challenges encountered and current applications.


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