

Title: Ontology Enrichment Based on Unstructured Text Data

Author: Ivana Lukšová

Department: Department of Software Engineering

Supervisor: Mgr. Martin Nečaský, Ph.D., Department of Software Engineering

Abstract: Semantic annotation, attaching semantic information to text data, is a fundamental task in the knowledge extraction. Several ontology-based semantic annotation platforms have been proposed in recent years. However, the process of automated ontology engineering is still a challenging problem. In this paper, a new semi-automatic method for ontology enrichment based on unstructured text is presented to facilitate this process. NLP and machine learning methods are employed to extract new ontological elements, such as concepts and relations, from text. Our method achieves F-measure up to 71% for concepts extraction and up to 68% for relations extraction.

Keywords: ontology, machine learning, knowledge extraction