Project Proposal

Ontology Learning from Text

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PROJECT INTENTION

An ontology formally represents knowledge as a set of concepts within a domain, and the relationships among those concepts. The process of defining and instantiating a knowledge base is referred to as knowledge markup or ontology population. Various algorithms of Machine Learning are used in the process of inferring the relationships between data and providing a formal vocabulary and taxonomy that models a specific domain. Ontologies can be written in a variety of ways (logical rules, programming code etc). The important thing here is not the method used but the content of these ontologies and their application in real world problem solving scenarios.

Recently, a lot of research is focused on developing an ontology for web based content gathering ie knowledge acquisition from text. This presents a problem of enormous complexity due to the heterogeneity of data available and the sheer amount of content present on the web. A popular method of inducing taxonomies from textual data is to use hierarchical clustering methods for synonym extraction and term clustering.

This project aims to perform a comparative study of methods that are being used for ontology engineering especially in the context of text based inferences. We also try to find available implementations of these algorithms and try to quantify them in terms of their varying degrees of success.

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