VerbNet Semantic Role Labeling

Motivation

Semantic Role Labeling (SRL) automatically assigns labels to the participants of a situation described in a sentence. For example, given the sentence

*Bill hits a table with a hammer*

we want to discover that *Bill* is the Agent, *table* is the Theme and *hammer* is the Instrument of the action. Whereas FrameNet- and PropBank-based SRL has received significant attention, almost no work has been done on VerbNet-based SRL, which is more linguistically involved, but also more theoretically motivated and language-independent. Our hypothesis is that using additional constraints from semantic role theory can improve the performance of SRL systems, which can be then used as a preprocessing step for question answering, machine translation and other tasks.

Possible Tasks

- Induce the VerbNet role hierarchy from data by applying hierarchical clustering to a corpus annotated with VerbNet-style semantic roles.
- Develop a VerbNet-based semantic role labeling system which incorporates constraints from semantic role theory.

References


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