



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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- A. Giuglea and A. Moschitti. 2006. Semantic role labeling via FrameNet, VerbNet and PropBank. In Proceedings of the 21st International Conference on Computational Linguistics and the 44th annual meeting of the Association for Computational Linguistics (ACL-44). ACL, Stroudsburg, PA, USA, 929-936.
- http://verbs.colorado.edu/verb-index/VerbNet_Guidelines.pdf

Contact

Analysis ■■■■□

Programming ■■■□□

Literature ■■■□□

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