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Deep semantic text analysis with inferences

People usually do not have problems with comprehending a natural language text and can easily answer questions for which there are no direct answers in the text. We can do that because we understand the meaning of the words and have knowledge about the world.

In this talk I present a semantic analyzer SemETAP, which is fed with this type of commonsense knowledge. SemETAP is able to build a semantic structure of the text and represent implicit information explicitly. A crucial component in this process is the inference engine, which extends the semantic representation with new knowledge based on concept decomposition rules (essentially explanatory dictionary entries in a formal language) and other common sense axioms.