

## Towards skolemize clauses binding for reasoning in inference engine

### ABSTRACT

The paper presents a reasoning technique for open-domain question answering (QA) system. QA system has attracted more attention to meet information needs providing users with more precise and focused retrieval answers. We proposed a skolemize clauses binding (SCB) for reasoning, along with the theorem proving to provide the basis answer extraction. QA systems employing combination of SCB and resolution theorem proving have been used to provide both satisfying and hypothetical answers. Satisfying answers are associated with ground term corresponding with questions whose logical form contains variables. Hypothetical answer is an answer which comes from the story or plot of text, and required logical thinking because it is not explicitly stated in the knowledge domain. In this case, the answer can be considered as a set of logical formula called skolemize clauses defining sufficient conditions characteristic the tuples of individuals which satisfying the query.

**Keyword:** Skolemize clauses binding (SCB); Question-answering systems; Reading comprehension task; Natural language processing systems