

Negation query handling engine for natural language interfaces to ontologies

ABSTRACT

Natural language interfaces to ontologies allow users to input their queries in natural language to the system and retrieve their desired information from ontologies. Many natural language interfaces have been developed to date but their capability in handling negation queries is limited.

This paper proposes a negation query handling engine which is particularly designed to handle user queries with negation. The proposed engine is designed to understand the complexity of natural language queries with negation which was previously not catered effectively by the existing systems. The proposed engine effectively understands the intent of the user query on the basis of a sophisticated algorithm which is governed by a set of techniques and transformation rules.

The proposed engine is evaluated using the Mooney data set and was found to comply and satisfy with most of the negation queries in the data set. The implementation of the proposed negation query handling engine can bring considerable improvements in natural language interfaces in handling negation queries.

Keyword: Natural language interfaces; Ontology; Semantic web; Negation queries; Search engines