DEV-NLQ
Direct Evaluation of Natural Language Queries

Paper: “A Demonstration of a Natural Language Query Interface to an Event-Based Semantic Web Triplestore”

“Who stole a car in 1918 or 1920 in a borough of New York?”

parser

\( \text{who (stole (a car) [(in (1918 or 1920), \text{in (a (borough_of New_York)))})]} \)

denotational semantics

\( \lambda \ldots (\lambda \ldots (\lambda \ldots \lambda \ldots ) [(\lambda \ldots , (\lambda \ldots \lambda \ldots ) ), (\lambda \ldots , (\lambda \ldots (\lambda \ldots \lambda \ldots )))] ) \Rightarrow \text{ANS} \)

TRIPLESTORE

\( \lambda \ldots \) are functional denotations of words based on an efficient version of Montague /Davidsonian Semantics.

The \( \lambda \ldots (\lambda \ldots (\lambda \ldots \lambda \ldots ) [(\lambda \ldots , (\lambda \ldots ) )], (\lambda \ldots , (\lambda \ldots (\lambda \ldots \lambda \ldots )))] \) above is an expression in the lambda calculus.

The lambda expressions are evaluated directly in the Haskell programming language, to give the ANSWER

Some functions (indicated by \( \uparrow \) in the above) are defined in terms of triplestore retrieval operations.

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