CUTE
Query Knowledge Graphs by Tabular Examples
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Motivation

• To explore large knowledge graphs, it’s difficult to write a correct and well-expressed query
• Query-by-example: previous work focuses on inputting a single or a pair of entities as examples
• CUTE: query knowledge graphs in complex scenarios by tabular examples and improve results with users labeling negative ones

Techniques

1. Select the exact entities from the drop-down menus (string based sim. measure)
2. Common types: Infer from the dataset ontology
   Common facts: At each column, a) Detect the same (sub, ?pred, ?obj)/(?sub, ?pred, obj) shared by all entities in the column; b) Rank those common attributes and let users choose from top-k
   Common relations: a) For each row, find shortest paths between any two entities and merge all paths to form a graph b) Find the maximal common subgraph of m graphs as the common relations
3. Replace entities with variables
4. This process will not be terminated until the user is satisfied.

Scenarios

Find out the code at:
https://github.com/Zichen-Wang/CUTE