Formally, in consequence, ObjectRank computation is defined as Definition 1.

Global ObjectRank and query-specific authorities. The combination is formulated as Eq. 4.

ObjectRank [4]

Global ObjectRank (Precomputed)

\[ r^{t+1}_g = dA r^t_g + \frac{1 - d}{|O|} e \]

Query-specific ObjectRank (Compute when query comes)

\[ r^{t+1}_q = dA r^t_q + \frac{1 - d}{|S(q)|} s \]

Overall ObjectRank scores for given query \( q \)

\( u \) is weighing parameter

\[ r = r_g \circ (r_q)^u \]

Keywords Search over LD

- User-friendly search method.
- Find entities related with input keyword query.

ObjectRank [4]

Results

(FORK, “South Korea”) Keyword query

Author

Paper

Year

A1

A2

P1

P2

Y1

Authority transfer schema graph

Authority transfer data graph

Gain

C1

C2

C3

Gain

C1

C2

C3

Leak

Leak

Relevance Feedback

Input: relevance judgements on (top-k) search results
Output: modified edge weights on schema graph

Evaluation

(a) FORK improves ranking.
(b) Best-learnt ObjectRank is the best.

Dataset

- Data: DBpedia 3.9
- Entity search benchmark [6]
Measurement: Precision@10

Highlights

- FORK
  - ObjectRank-based keyword search over Linked Data (LD)
  - Relevance feedback-based authority transfer weights learning
- Experiments
  - Ensure weights are learnt properly.
  - Best-learnt ObjectRank achieves the best accuracy.
