Text Selections as Implicit Relevance Feedback

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Takeaway: Use text selections as feedback to improve relevance

Text Selection as Feedback

- Users mark blocks of text for further manipulation
- Recorded at scale via client side JavaScript (Buscher et al, 2012)

- 1.9% of queries have text selection (inc. search box, answers)
- 1.0% of queries have selection on result caption + follow-on query

Microsoft **SQL** Server: Checkpoint causes need for better IO …
your **clustered index** based on a monotonically increasing column. As such, the random **write** … Identity columns provide monotonically increasing keys. **SQL** creates a clustered …
database.itags.org/**sql**-server/45383

Text Selection
(e.g., for copy & paste)

Study

- 928 users' queries over 4 weeks
- Recorded all SERP interactions (inc. cursor, scrolls)
- 389 queries had selection
  + overlap in query text with follow-on query

- Binary relevance judgments inferred from clicks
- Measured MAP change with re-ranking

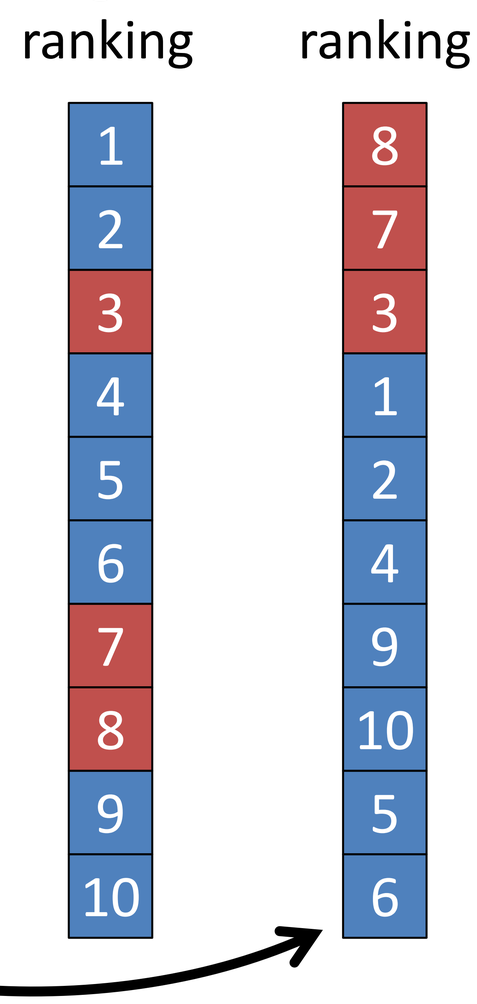
Systems

1. **Original ranking (baseline)** from search engine
2. **QuerySimilarity**
   - Re-rank results for next query based on similarity with query-relevant snippets for the current query
3. **SelectionSimilarity**
   - Re-rank results for next query based on similarity with snippets with text selection

Method

Re-rank queries where model could be generated with both systems. Compute average precision

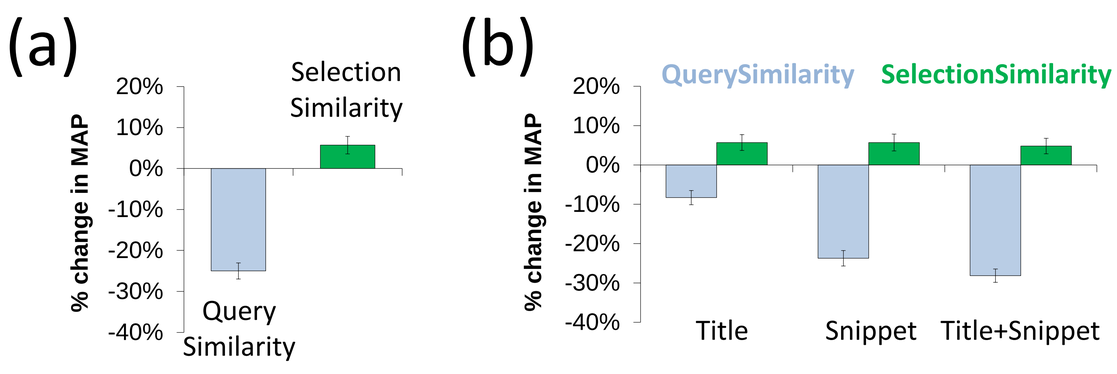
… » Next query in session



Re-rank results, favoring **terms in the caption** which has the text selection

Findings

- SelectionSimilarity has 6% gains in relevance
- QuerySimilarity baseline harms relevance



Change in MAP for methods vs. baseline (a) and impact of container on MAP change (b) (± SEM)

- SelectionSimilarity unaffected by container
- QuerySimilarity is better if use title only

Conclusions

- Novel method for using text selections on SERPs as implicit feedback
- Selections as feedback improve result relevance

Future Work

- Build more sophisticated models that learn features of selections, including features of selected text & post-selection behavior