

Foundations of Information Retrieval

Exercise 5

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Questions to: Elena Demidova: demidova@l3s.de

Search engine evaluation

1. A collection of documents contains 20 documents that are relevant for a given query. For this query, the search engine returns 8 relevant and 10 not relevant documents.
 - a. Compute **precision** and **recall** of this search result as well as the **F₁-measure**.
 - b. What are the advantages of the F-measure compared to the arithmetic mean of precision and recall?
2. The following list (left -> right) represents the order of the relevant (R) and not relevant (N) search results, that are returned from a document collection for a query. In total, this document collection contains 8 documents that are relevant for this query.

R R N N N N N N R N R N N N R N N N N R

- a. Compute the **top-20 precision** and the **F₁-measure** for this result.
- b. Compute the **not interpolated precision at the 25% recall**.
- c. Compute the **interpolated precision at the 33% recall**.