

Foundations of Information Retrieval

Exercise 5

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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 und 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. A collection of documents contains 10 documents that are relevant for the query q. For this query, the search engines S₁ and S₂ return the following relevant (R) and non-relevant (N) documents:

S₁: NNNRR NNRRR
S₂: RRNNN NNRRN

Draw a precision-recall diagram for the both search results and compare the quality of the search results based on the **interpolated precision at 20% recall**.