Round 1 results — Run elhuyar_rRnk_cbert submitted from Elhuyar_NLP_team

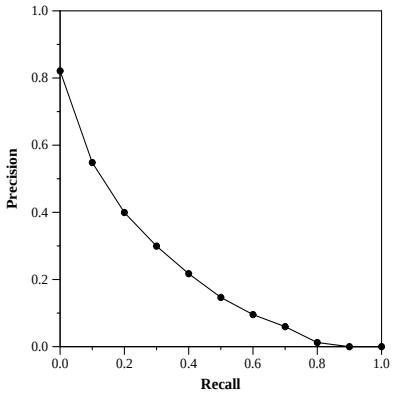
Run Description

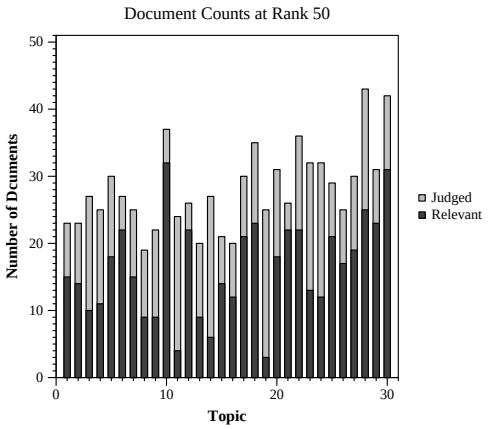
We tackle this document retrieval task as a passage retrieval task performed in two steps: a first ranking and b) re-ranking. Our system returns docids of their best scored passages. In order to obtain the first ranking of relevant passages of the collection corresponding to the queries, we use a language modeling based information retrieval approach (Ponte & Croft, 1998). For that purpose, we used the Indri search engine (Strohman, 2005), which combines Bayesian networks with language models. Then, we make a re-ranking based on BERT following a strategy similar to the one proposed by Nogueira and Cho (2019). As we do not have a collection of query pairs and relevant paragraphs for tuning BERT for this passage retrieval task, we simulate a training collection composed of titles and their corresponding abstracts from the COVID-19 Open Research dataset. Through this training collection we tuned the Clinical BERT model (Alsentzer et al., 2019) to the task of identifying relevant queries and paragraphs.

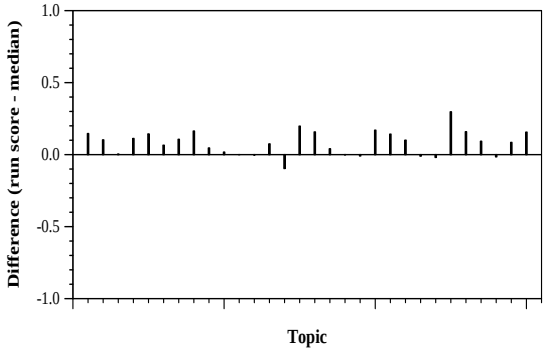
Summary Statistics	
Run ID	elhuyar_rRnk_cbert
Topic type	automatic
Contributed to judgment sets?	yes

Overall measures	
Number of topics	30
Total number retrieved	29999
Total relevant	2352
Total relevant retrieved	1328
MAP	0.2093
Mean Bpref	0.4066
Mean NDCG@10	0.4864

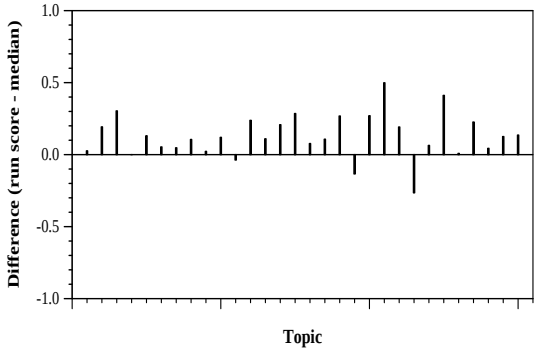
Document Level Averages	
	Precision
At 5 docs	0.6133
At 10 docs	0.5500
At 15 docs	0.4867
At 20 docs	0.4483
At 30 docs	0.4044
R-Precision	
Exact	0.2764







Per-topic difference from median bpref for all Round 1 runs



Per-topic difference from median NDCG@10 for all Round 1 runs

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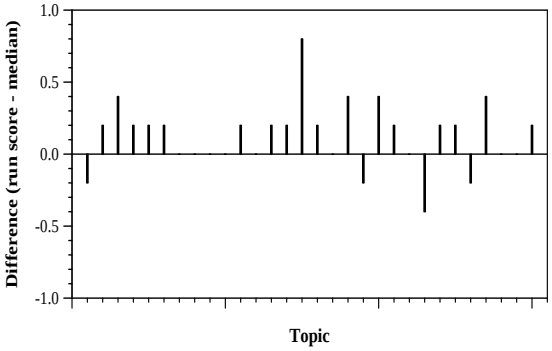

Per-topic difference from median P@5 for all Round 1 runs