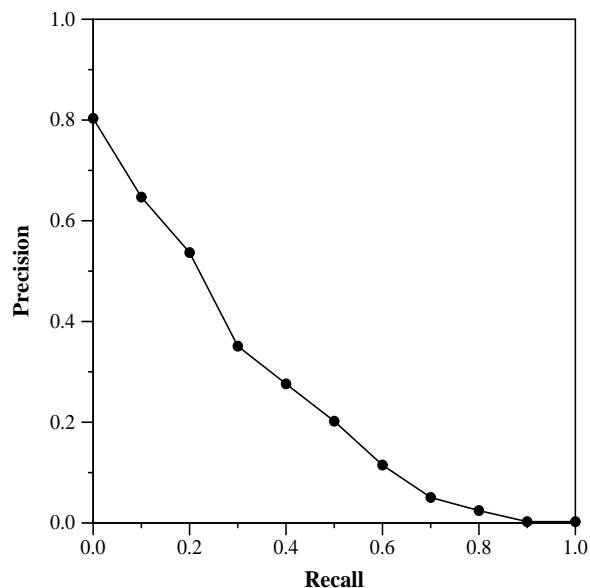
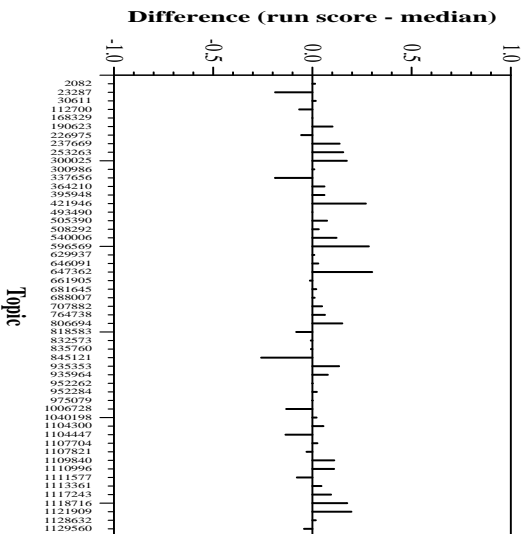


## Deep Learning Track results — (bcai) Bosch Center for AI

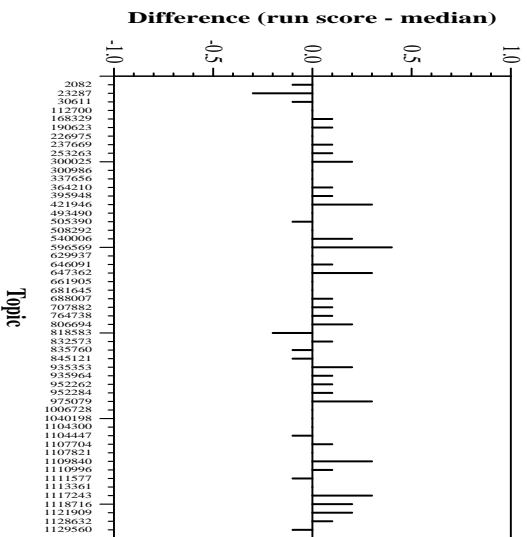
Run Description	
Run ID:	bcai_p_mbert
Task:	Passage Ranking
Subtask:	Full ranking from the collection
Topic type:	Automatic
Single-stage retrieval?	No
Dense retrieval?	Yes
Used deep nn model?	Pre-trained model
Type of training:	This year's MS MARCO training data; Previous year's MS MARCO training data
Pre-processing/indexing cost:	1. Training bl_bcai_p_nn_rt 2. Indexing document texts using Lucene. 3. Creation of forward indices for passages and documents.
Query processing cost:	1. Retrieval: see the cost of bl_bcai_p_nn_rt 2. Re-ranking took 4 seconds for 400 passages on a single RTX 3090.

Overall measures		Document Level Averages	
Number of topics	53	Precision	
Total number retrieved	5300	At 5 docs	0.6264
Total relevant	3427	At 10 docs	0.5717
Total relevant retrieved	1163	At 15 docs	0.5031
MAP	0.2487	At 20 docs	0.4708
Mean NDCG@10	0.6363	At 30 docs	0.4063
Mean Reciprocal Rank	0.7765	R-Precision	
		Exact	0.3146

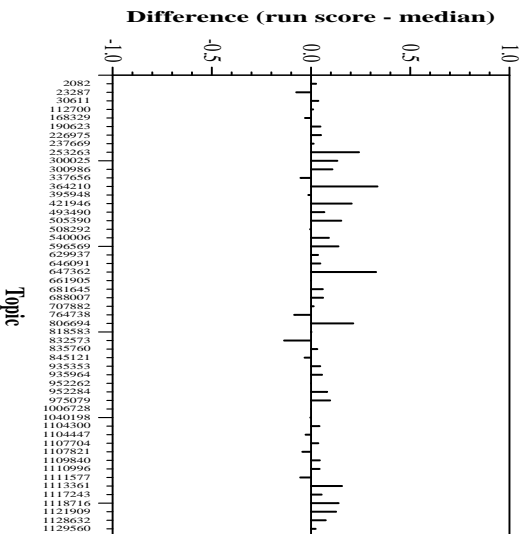




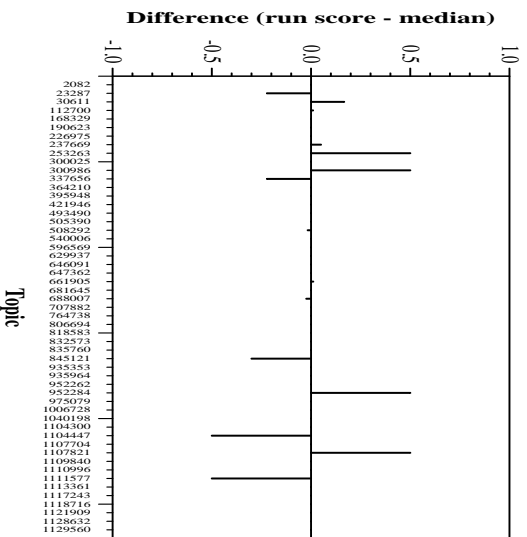
Per-topic difference from median for NDCG@10 for Passage Ranking runs



Per-topic difference from median for Precision for Passage Ranking runs



Per-topic difference from median for Average Precision for Passage Ranking runs



Per-topic difference from median for Reciprocal Rank for Passage Ranking runs