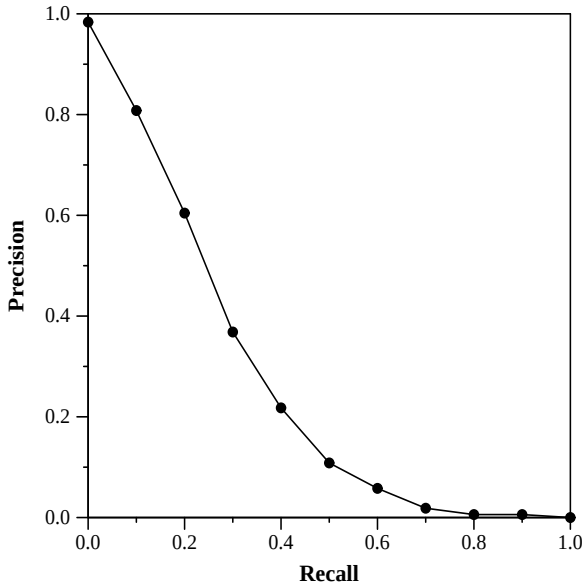
Deep Learning Track results — (PASH) PingAn Smart Health

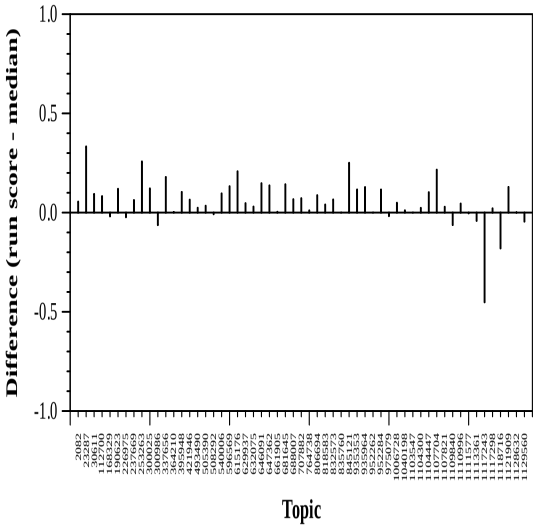
Run Description	
Run ID:	pash_doc_r1
Task:	Document Ranking
Subtask:	Reranking the official top 100
Topic type:	Automatic
Single-stage retrieval?	No
Dense retrieval?	No
Used deep nn model?	Pre-trained model
Type of training:	This year's MS MARCO training data
Pre-processing/indexing cost:	The open source pre-trained docT5query model is used to predict queries for passages or segment passages(for documents). The process of query generation takes 8 days on 64 Tesla V100 GPUs(16GB). Indexing the collection takes 1.5 hours on 32 threads.
Query processing cost:	In the pointwise stage, inference on all queries takes approximately 5 hours on 8 Tesla V100 GPUs(16GB). In the pairwise stage, inference on all queries takes approximately 5 hours on 16 Tesla V100 GPUs(16GB).

Overall measures	
Number of topics	57
Total number retrieved	5700
Total relevant	8203
Total relevant retrieved	2086
MAP	0.2665
Mean NDCG@10	0.7150
Mean Reciprocal Rank	0.9772

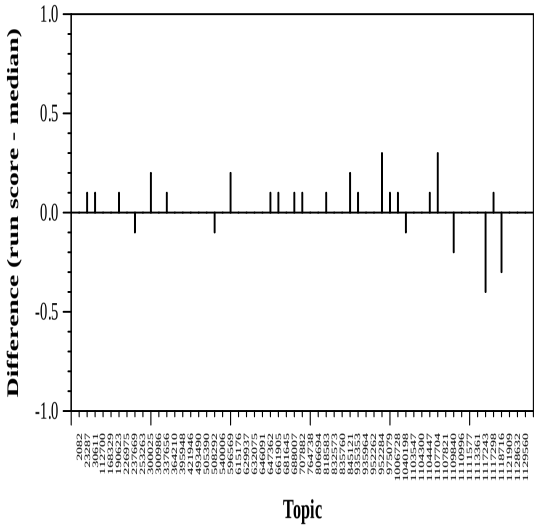
Document Level Averages	
	Precision
At 5 docs	0.9193
At 10 docs	0.8544
At 15 docs	0.8070
At 20 docs	0.7596
At 30 docs	0.6778

R-Precision	
Exact	0.3003

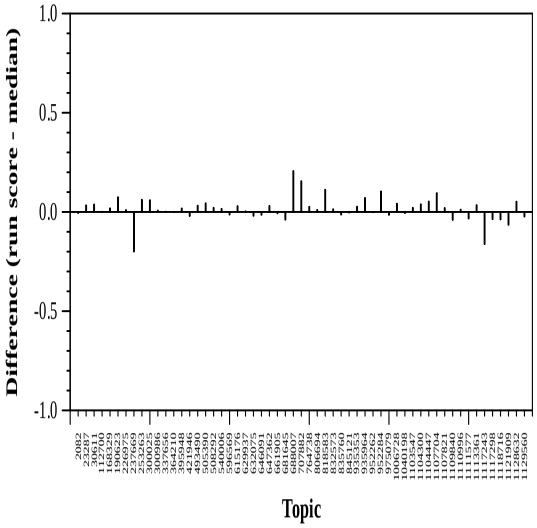




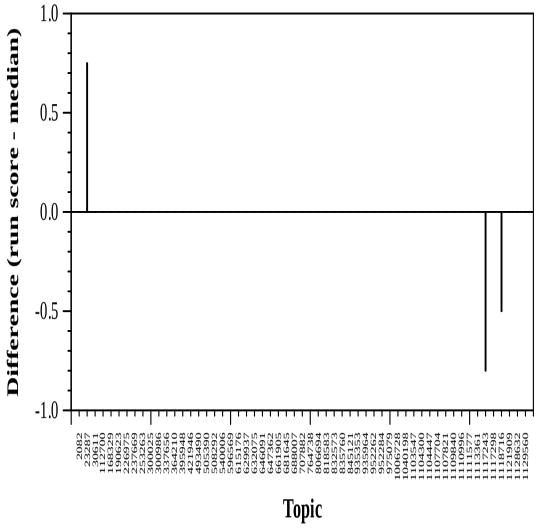
Per-topic difference from median for NDCG@10 for Document Ranking runs



Per-topic difference from median for Prec@10 for Document Ranking runs



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



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