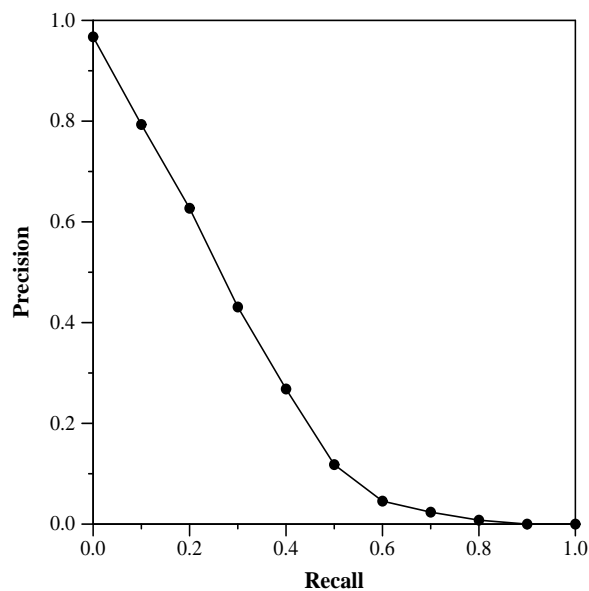
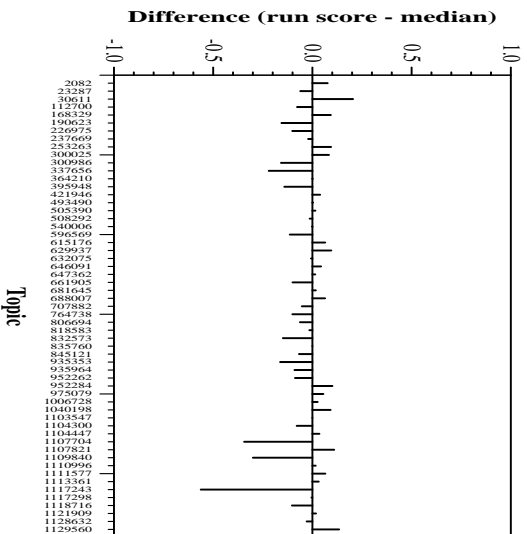


Run Description	
Run ID:	Fast_Forward_5
Task:	Document Ranking
Subtask:	Full ranking from the collection
Topic type:	Automatic
Single-stage retrieval?	No
Dense retrieval?	No
Used deep nn model?	Pre-trained model
Type of training:	Previous year's MS MARCO training data
Pre-processing/indexing cost:	The dense indexing cost would be roughly 1-2 weeks on 4 V100. Sparse indexing takes an hour on the CPU.
Query processing cost:	We have used the CPU for query processing. The approximate processing cost is 377ms per query (177ms sparse retrieval, 192ms dense query encoding, and lookups, 8ms for interpolation). These times depend on the system load factor.

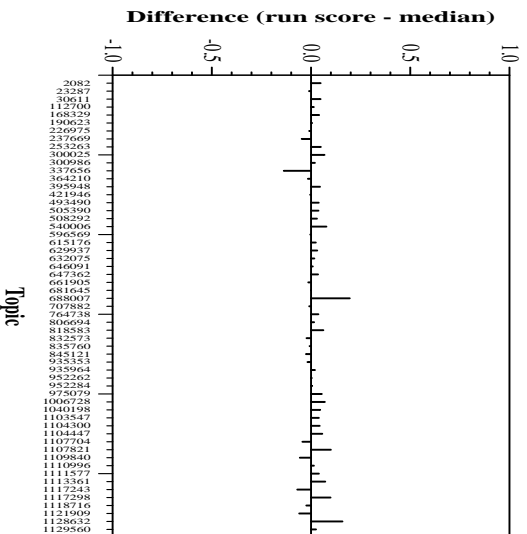
Overall measures	
Number of topics	57
Total number retrieved	5700
Total relevant	8203
Total relevant retrieved	2470
MAP	0.2730
Mean NDCG@10	0.6282
Mean Reciprocal Rank	0.9373

Document Level Averages	
Precision	
At 5 docs	0.8491
At 10 docs	0.7982
At 15 docs	0.7556
At 20 docs	0.7096
At 30 docs	0.6550
R-Precision	
Exact	0.3407

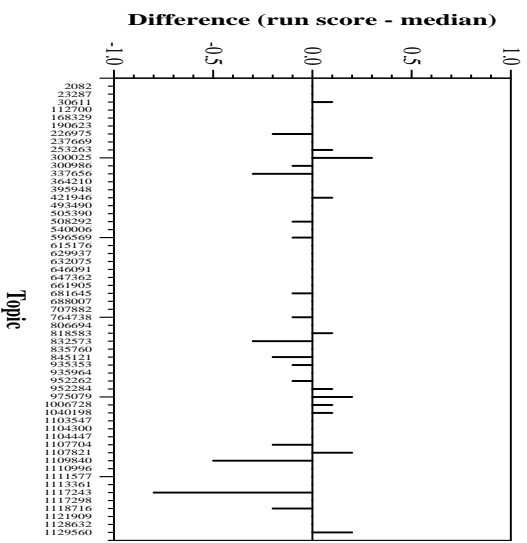




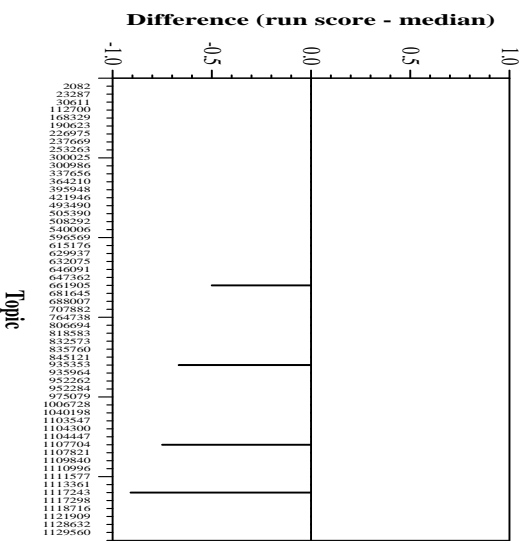
Per-topic difference from median for NDCG@10 for Document Ranking runs



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



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



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