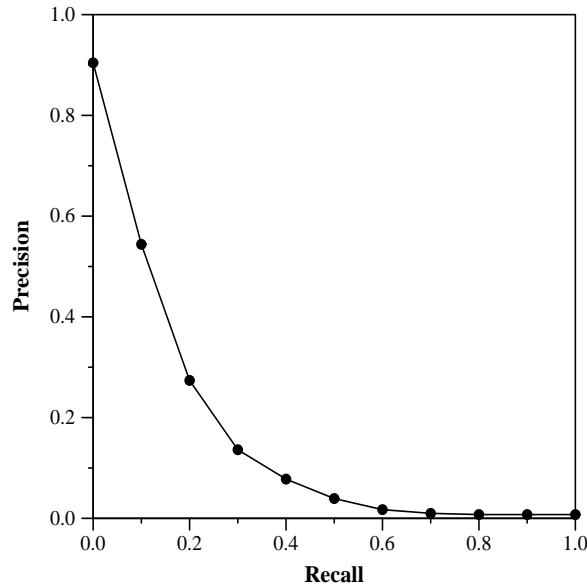


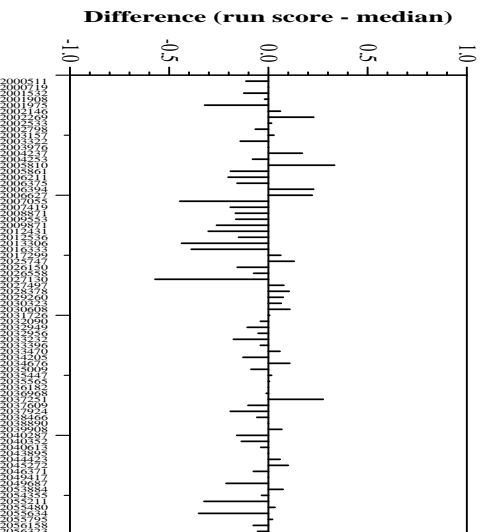
Deep Learning Track results — (DOSSIER) TU Vienna

Run Description	
Run ID:	tuvienna
Task:	Document Ranking
Subtask:	Full ranking from the collection
Topic type:	Automatic
Single-stage retrieval?	Yes
Dense retrieval?	Yes
Baseline run?	No
Used deep nn model?	Pre-trained model
Type of training:	Previous year's MS MARCO training data
Training cost:	There are 3 stages of training the ColBERTer model. ColBERTer training (80 hours) and then compression training either to a the 32-dimensional compression (43 GPU hours). All experiments are run on 1 GPU A40 with 48GB memory. Total GPU hours: 123
Pre-processing/indexing cost:	ColBERTer-dim32: 5 GPU hours vectorizing and indexing All experiments are run on 1 GPU NVIDIA GeForce RTX 3090 with 24GB memory. Total GPU hours: 5
Query processing cost:	ColBERTer-dim32: 297 seconds per query for encoding, nn lookup and aggregation All experiments are run on 1 GPU NVIDIA GeForce RTX 3090 with 24GB memory. Total GPU hours: 1

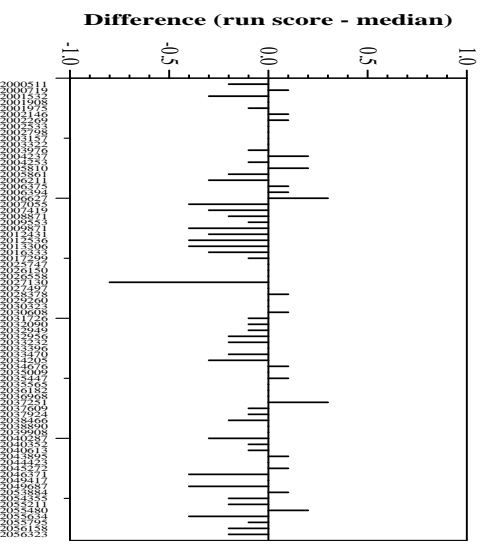
Overall measures	
Number of topics	76
Total number retrieved	7600
Total relevant	9152
Total relevant retrieved	1779
MAP	0.1475
Mean NDCG@10	0.4876
Mean Reciprocal Rank	0.8799

Document Level Averages	
Precision	
At 5 docs	0.6737
At 10 docs	0.5961
At 15 docs	0.5281
At 20 docs	0.4888
At 30 docs	0.4197
R-Precision	
Exact	0.2109

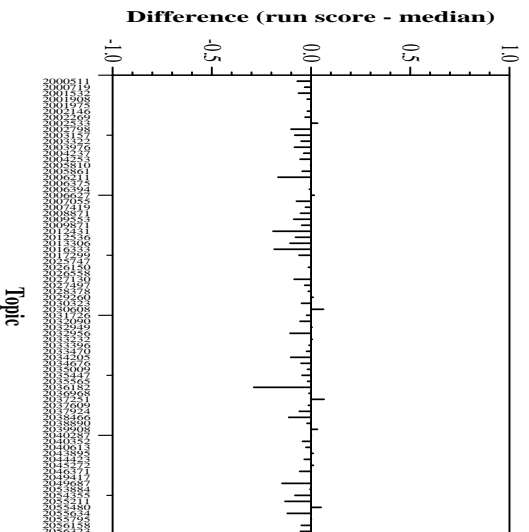




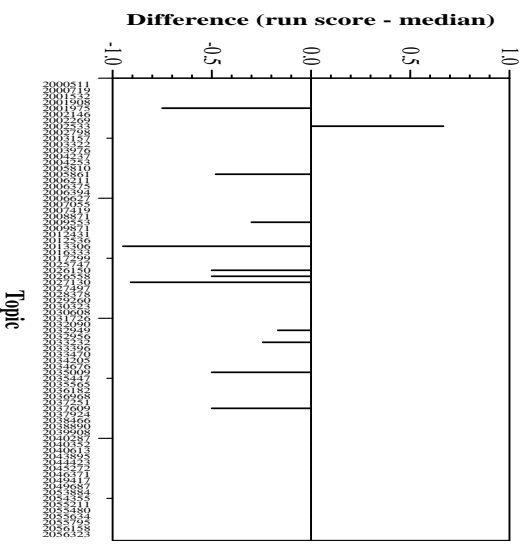
Per-topic difference from median for NDCG@10 for Document Ranking runs



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