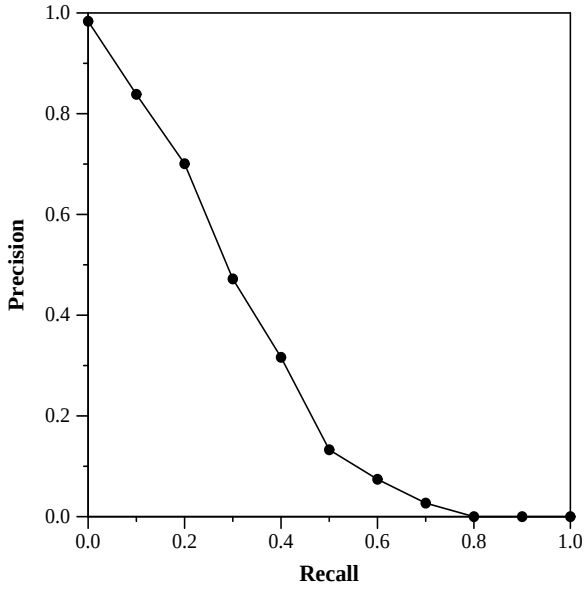
Deep Learning Track results — (NLE) Naver Labs Europe

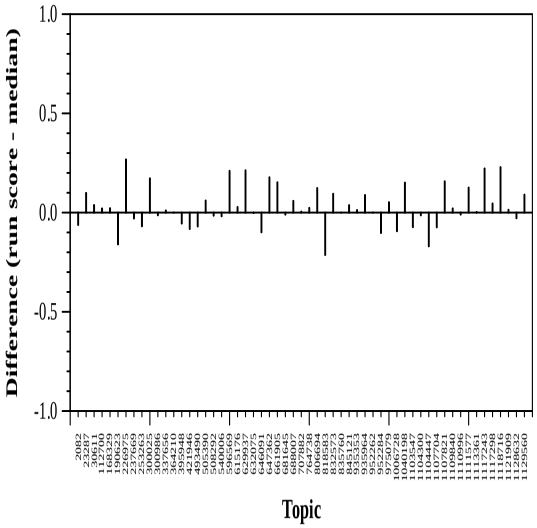
Run Description	
Run ID:	NLE_D_V1andV2
Task:	Document Ranking
Subtask:	Full ranking from the collection
Topic type:	Automatic
Single-stage retrieval?	No
Dense retrieval?	No
Used deep nn model?	Pre-trained model
Type of training:	This year's MS MARCO training data; Previous year's MS MARCO training data
Pre-processing/indexing cost:	For each first stage network it takes 1 day on 4V100 for indexing. Each index takes ∼100 GB after finished (500GB in total). Index is then used only on CPU
Query processing cost:	Approximative values: First stage ranker takes 5 sec per query on 24 cpus. 7 of the 10 rerankers take 2 sec per query on 4 V100. 3 of the 10 rerankers take 200 ms per query on 4 V100. So in total it takes 19.6sec per query on 24 cpus + 4V100

Overall measures	
Number of topics	57
Total number retrieved	5700
Total relevant	8203
Total relevant retrieved	2581
MAP	0.2969
Mean NDCG@10	0.6871
Mean Reciprocal Rank	0.9503

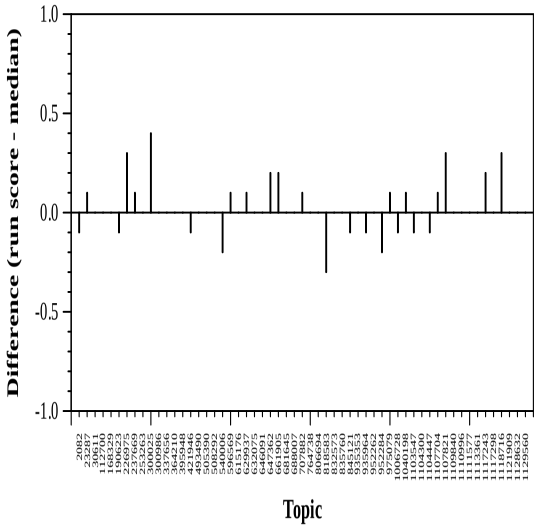
Document Level Averages	
	Precision
At 5 docs	0.8702
At 10 docs	0.8509
At 15 docs	0.8058
At 20 docs	0.7640
At 30 docs	0.6971

R-Precision	
Exact	0.3680

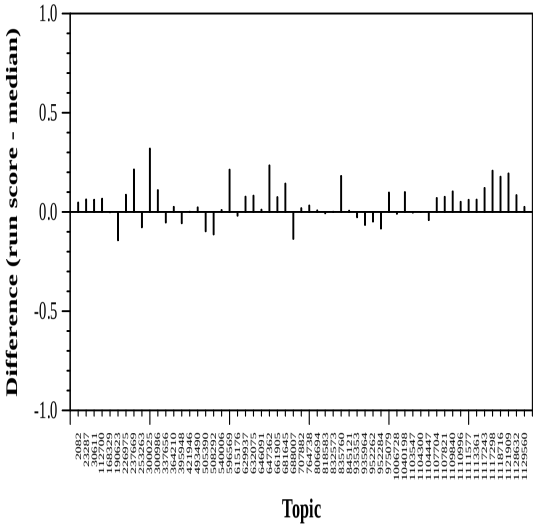




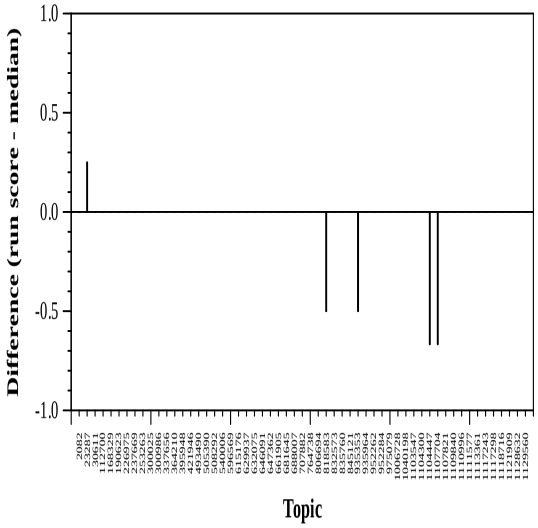
Per-topic difference from median for NDCG@10 for Document Ranking runs



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