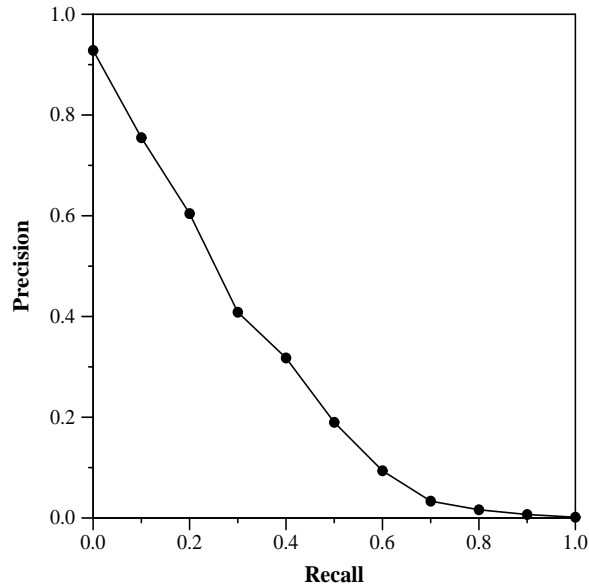


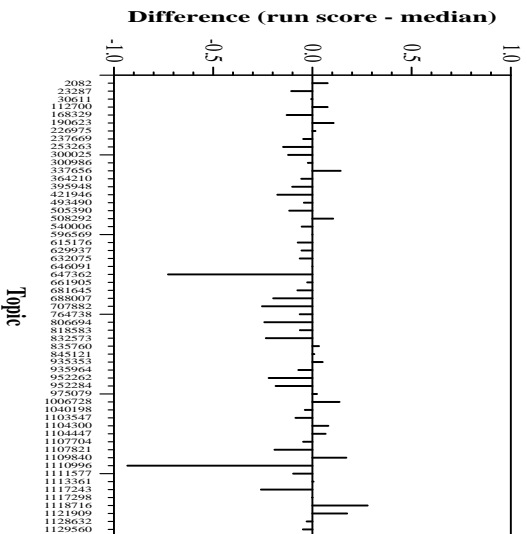
Deep Learning Track results — (CERTH_ITI_M4D) Information Technologies Institute CERTH

| Run Description | |
|-------------------------------|--|
| Run ID: | bigram_qe_cedr |
| Task: | Document 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: | System: GPU: GTX 2080Ti (11GB memory), RAM: 120GB, HDD indexing: ~12 hours |
| Query processing cost: | System: GPU: GTX 2080Ti (11GB memory), RAM: 120GB, HDD ~ 35 seconds/ query |

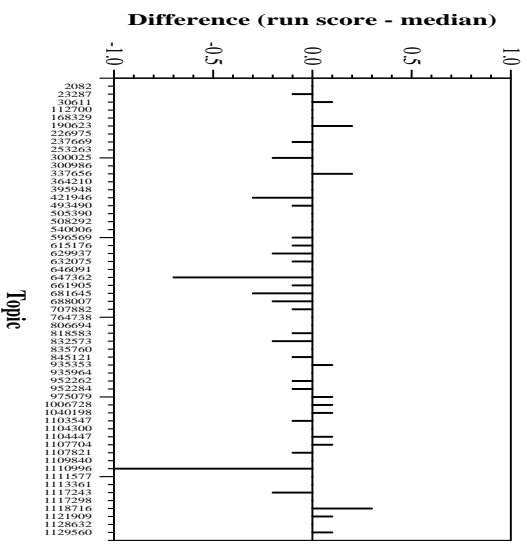
| Overall measures | |
|--------------------------|--------|
| Number of topics | 57 |
| Total number retrieved | 5700 |
| Total relevant | 8203 |
| Total relevant retrieved | 2574 |
| MAP | 0.2802 |
| Mean NDCG@10 | 0.5920 |
| Mean Reciprocal Rank | 0.8872 |

| Document Level Averages | |
|-------------------------|-----------|
| | Precision |
| At 5 docs | 0.8140 |
| At 10 docs | 0.7754 |
| At 15 docs | 0.7333 |
| At 20 docs | 0.6851 |
| At 30 docs | 0.6380 |
| R-Precision | |
| Exact | 0.3439 |

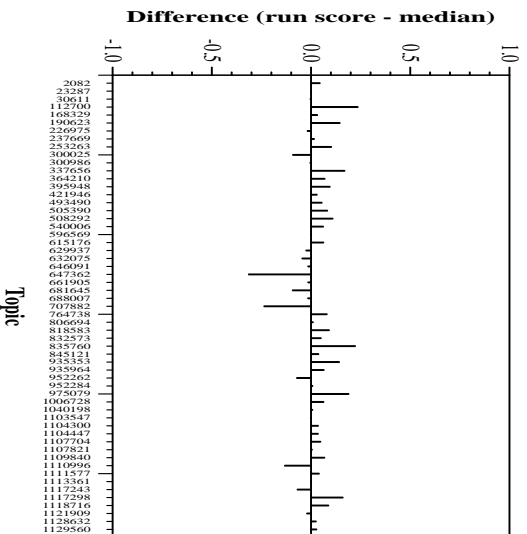




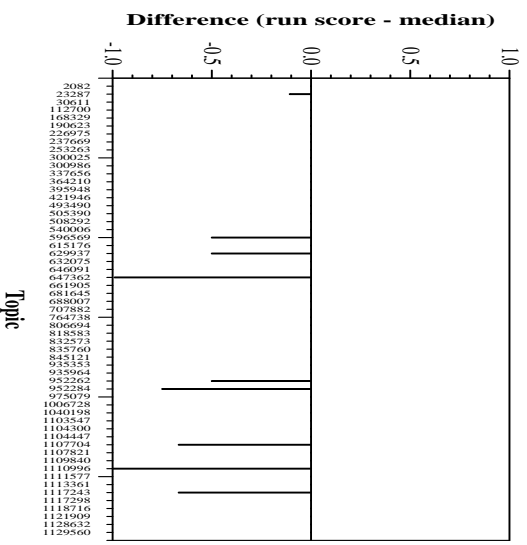
Per-topic difference from median for NDCG@10 for Document Ranking runs



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