|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Evaluation  metric | Your  algorithm | Vector  Space Model | BM25 | Language  Model with  Dirichlet  Smoothing | Language  Model with  Jelinek  Mercer  Smoothing |
| P@5 | 0.00 | 0.20 | 0.6 | 0.00 | 0.20 |
| P@10 | 0.00 | 0.40 | 0.3 | 0.30 | 0.40 |
| P@20 | 0.15 | 0.30 | 0.3 | 0.30 | 0.25 |
| P@100 | 0.04 | 0.10 | 0.1 | 0.11 | 0.100 |
| Recall@5 | 0.00 | 0.03 | 0.0968 | 0.00 | 0.03 |
| Recall@10 | 0.00 | 0.129 | 0.0968 | 0.09 | 0.1290 |
| Recall@20 | 0.098 | 0.1935 | 0.1935 | 0.19 | 0.16 |
| Recall@100 | 0.1290 | 0.322 | 0.322 | 0.35 | 0.32 |
| MAP | 0.0214 | 0.1074 | 0.1409 | 0.0851 | 0.09 |
| MRR | 0.08 | 0.50 | 1.00 | 0.14 | 0.20 |
| NDCG@5 | 0.00 | 0.21 | 0.6399 | 0.00 | 0.131 |
| NDCG@10 | 0.00 | 0.34 | 0.4153 | 0.206 | 0.300 |
| NDCG@20 | 0.1065 | 0.29 | 0.3783 | 0.2375 | 0.23 |
| NDCG@100 | 0.0982 | 0.29 | 0.3576 | 0.2713 | 0.2720 |

Long Query

Short Query

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Evaluation  metric | Your  algorithm | Vector  Space Model | BM25 | Language  Model with  Dirichlet  Smoothing | Language  Model with  Jelinek  Mercer  Smoothing |
| P@5 | 0.20 | 0.40 | 0.60 | 0.60 | 0.40 |
| P@10 | 0.10 | 0.5 | 0.50 | 0.50 | 0.50 |
| P@20 | 0.10 | 0.4 | 0.30 | 0.35 | 0.25 |
| P@100 | 0.06 | 0.09 | 0.10 | 0.09 | 0.10 |
| Recall@5 | 0.032 | 0.06 | 0.09 | 0.0968 | 0.06 |
| Recall@10 | 0.032 | 0.16 | 0.16 | 0.1613 | 0.16 |
| Recall@20 | 0.0645 | 0.25 | 0.19 | 0.2258 | 0.16 |
| Recall@100 | 0.1935 | 0.29 | 0.322 | 0.2903 | 0.322 |
| MAP | 0.06 | 0.183 | 0.1894 | 0.14 | 0.146 |
| MRR | 1.00 | 1.00 | 1.00 | 0.50 | 1.000 |
| NDCG@5 | 0.33 | 0.55 | 0.7227 | 0.49 | 0.55 |
| NDCG@10 | 0.22 | 0.58 | 0.62 | 0.466 | 0.57 |
| NDCG@20 | 0.1793 | 0.47 | 0.4341 | 0.3704 | 0.36 |
| NDCG@100 | 0.2112 | 0.38 | 0.4036 | 0.3180 | 0.37 |