**Evaluation Report:**

**Introduction:**

In this report I will discuss the status of report, in which programming language it is implemented and how much progress we had made in this implementation.

**Programming Language:**

Python 3.7

**Implementations:**

It is a complete implementation of Cosine similarity function as well as Okapi similarity function.

**Manual Relevancy Test:**

Query “europe” found more often in document 192 as a focused in least part, therefore, Document 192 is more relevant.

Query “stock rally” found more often in document 66 as a focused in least part, therefore, Document 66 is more relevant.

Query “stock rally” found more often in document 134 as a focused in least part, therefore, Document 134 is more relevant.

Query “stock future higher” found more often in document 18 as a focused in least part, therefore, Document 18 is more relevant.

**MAP@10 Computation:**

|  |  |
| --- | --- |
| **Avg. of Similarities by Cosine Function** | **Avg. of Similarities by Cosine Function** |
| Avg. Precision Query1 = 0.08879348377842014, | Avg. Precision Query1 = 3.125314608292299 |
| Avg. Precision Query2 = 0.1119460528152371, | Avg. Precision Query2 = 4.576679618210833 |
| Avg. Precision Query3 = 0.09470917680073639, | Avg. Precision Query3 = 6.906678390476598 |
| Avg. Precision Query4 = 0.053654503378345944, | Avg. Precision Query4 = 10.311475366212523 |
| Mean Avg. Precision = 0.08727580419318488 | Mean Avg Precision = 6.230036995798063 |

MAP@10 given by Okapi function is much higher than MAP@10 given by Cosine function, therefore, Okapi Function is better than Cosine Function.

**MAP@5 Computation:**

|  |  |
| --- | --- |
| **Avg. of Similarities by Cosine Function** | **Avg. of Similarities by Cosine Function** |
| Avg. Precision Query1 = 0.09185365552010835 | Avg. Precision Query1 = 6.563368377327843 |
| Avg. Precision Query2 = 0. 145289580792139 | Avg. Precision Query2 = 5.405311756176962 |
| Avg. Precision Query3 = 0. 10886962068309902 | Avg. Precision Query3 = 7.381840894248391 |
| Avg. Precision Query4 = 0. 05433233561450135 | Avg. Precision Query4 = 12.611197022512963 |
| Mean Avg. Precision = 0. 10008629815246192 | Mean Avg Precision = 7.990429512566539 |

MAP@5 given by Okapi function is much higher than MAP@5 given by Cosine function, therefore, Okapi Function is better than Cosine Function.