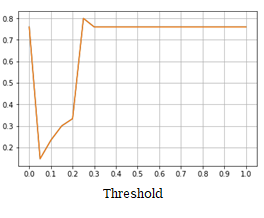
**Group 12**

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1. **Simple graph-ranking approach**

For the ranking procedure we used a maximum number of 50 iterations and a damping parameter of d = 0.15. The minimum threshold of cosine similarity between sentences was varied, using values between 0 and 1 with an interval of 0.05 between values.

For the text we chose a review of a TV show, and produced an “optimal” summary using an online summarization tool.

The obtained results are shown on Figure 1.

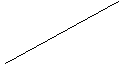
The highest Average Precision was of 0.8, for a value for the threshold of 0.25.

Figure 1: AP for the different threshold values.

1. **Improved graph-ranking**

|  |  |  |
| --- | --- | --- |
| Weight  Prior | Uniform | Cosine Similarity |
| Uniform | 0.1598 | 0.16733 |
| Degree Centrality | 0.163 | 0.1695 |
| Sentence Position | 0.1694 | **0.1722** |

Figure 2: MAP for the different combinations of prior probabilities and weights.

The obtained results are shown on Figure 2.

We implemented the following prior probabilities:

* Degree Centrality – sentences with more nodes in a graph are more important.
* Sentence Positions – sentences that appear first in a document are more relevant.

For the weights we used the cosine similarity between sentences.

We also considered removing stopwords, but obtained worse results, with a maximum MAP of 0.1695.

Sentence position and Cosine Similarity yielded the best results, improving the simple approach (uniform prior probabilities and weights) by 0.124.