

Modern Talking: Key-Point Analysis using Modern Natural Language Processing

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Abstract

TODO

1 Introduction

Test citation (Bar-Haim et al., 2020a)

TODO

2 Related Work

2.1 Key Point Analysis

Given the first track of the shared task analyzing key points is crucial. In their work (Bar-Haim et al., 2020a) Bar-Haim et al. propose an approach for summarising large argument collections to small sets of key points. Thus covering a sufficient amount of all arguments. They show that domain experts can very quickly create pro and con key points, which are able to "capture the gist" of the arguments on the given topic. All this without being exposed to the arguments themselves. Furthermore they develop the large-scale dataset ArgKP which is the foundation of this shared task. In a later work (Bar-Haim et al., 2020b) Bar-Haim et al. construct an automatic method for key point extraction which can compete with key points created by human domain experts. The method consists of two aspects. Assuming that the key points can be found among the given comments they first select short, high quality comments as key point candidates and then select the candidate with the highest data coverage. Using the HuggingFace transformer framework they fine-tune four different models from which ALBERT (Lan et al., 2019) has the best F1 score with 0.809 but RoBERTa (Liu et al., 2019) (F1 score of 0.773) is chosen for key point extraction since it has a 6 times faster inference time. In the paper (Egan et al., 2016), Egan et al. propose a summarising for informal arguments such as they occur in online political debates. By extracting verbs and their syntactic arguments they

retrieve points which can make key content accessible. By grouping these points they propose to create discussion summaries.

2.2 Argument Clustering

Argument Clustering is a mighty tool that enables algorithms to assign multiple arguments, which address a similar key message to a given topic. The paper (Reimers et al., 2019) Reimers et al. make use of "contextualized word embeddings to classify and cluster topic-dependent arguments". Having performed argument classification they then cluster arguments using agglomerative hierarchical clustering

2.3 Stance Classification

3 Data

TODO

4 Approach

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4.1 Baseline

TODO

5 Results

TODO

6 Conclusion and Future Work

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6.1 Future Work

TODO

References

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A Appendix

We release our source code online under the free MIT license.¹

¹<https://github.com/heinrichreimer/modern-talking>