TARGER: Neural Argument Mining at Your Fingertips

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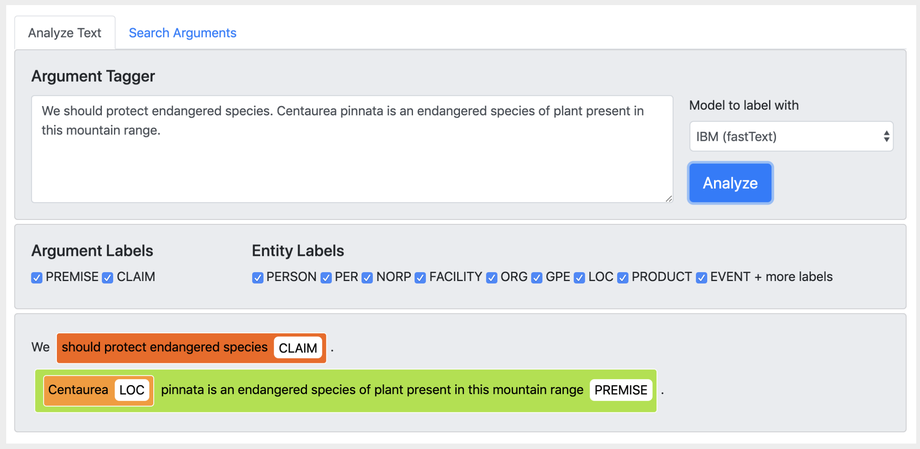
Abstract

We present TARGER, an open source neural argument mining framework, which comes with a web interface and API for neural argument mining and retrieval. It can tag arguments in free texts and retrieve arguments from the Common Crawl-based DepCC corpus (Panchenko et al., 2018).

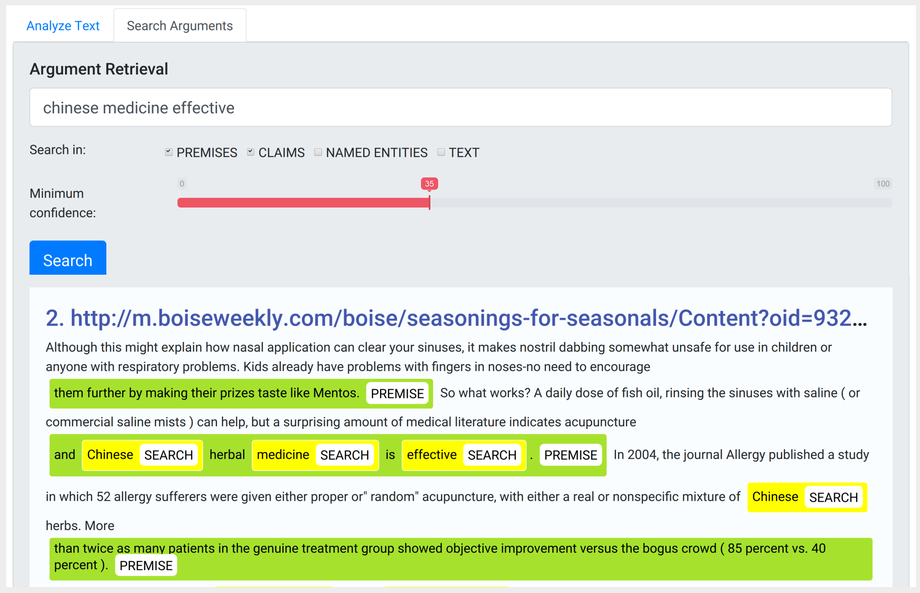
TARGER's Assets

- Easily accessible web interface and RESTful API
- Simple to incorporate into existing NLP pipelines
- Web-scale retrieval of argumentative sentences
- Various models pretrained on diverse datasets

Analyze Input Text

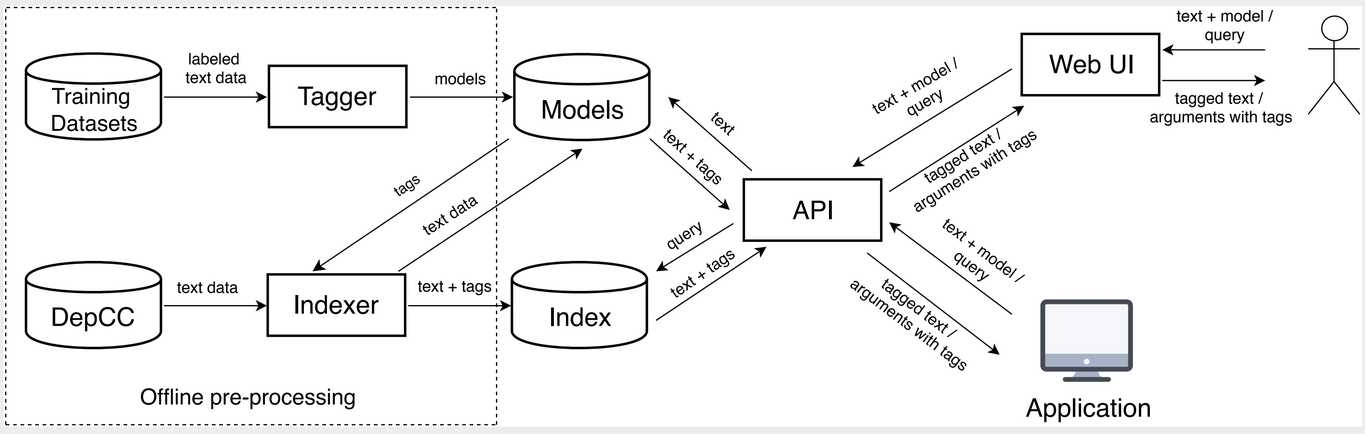


Search Common Crawl for Arguments



https://demo.webis.de/targer/

Modular Architecture



- BiLSTM-CNN-CRF neural tagger for argument components identification (Ma and Hovy, 2016)
- GloVe (Pennington et al., 2014), fastText (Mikolov et al., 2018), and dependency-based embeddings (Levy and Goldberg, 2014)
- Pre-trained on persuassive essays (Eger et al., 2017), web discourse (Habernal and Gurevych, 2017), and IBM Debater data (Levy et al., 2018)
- Implemented in Python 3.6 / PyTorch 1.0

Conclusions

- User-friendly web interface and easily accessible RESTful API for argument mining
- Easily re-trainable models on standard datasets
- Next steps:
  - Integrating models based on ELMo (Peters et al., 2018) and BERT (Devlin et al., 2019)
  - Tackling the problem of domain-specific argument tagging

References

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This work was partially supported by the German Academic Exchange Service (DAAD) through the short-term research grant 57314022 "Argument Mining in Web Documents using Orthogonal Simple Recurrent Networks" and by the Deutsche Forschungsgemeinschaft (DFG) through the project "ACQuA: Answering Comparative Questions with Arguments" (grants BI 1544/7-1 and HA 5851/2-1) as part of the priority program "RATIO: Robust Argumentation Machines" (SPP 1999).