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

TARGER’s Architecture

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 persuasive 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


This work was partially supported by the German Academic Exchange Service (DAAD) through the short-term research grant 57249322 “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 1546/7-1 and HA 5851/2-1) as part of the priority program “RATIO: Robust Argumentation Machines” (SPP 1999).