Sentence Simplification

**Abstract:**

Sentence simplification aims to simplify the content and structure of complex sentences, and thus make them easier to interpret for human readers, and easier to process for downstream NLP applications. In this paper, we adapt an architecture of Encoder-Decoder model presented by Facebook AI in []. Facebook's model was originally developed for Neural Machine Translation, however, we modified it for the sentence simplification task.

**Introduction:**

The goal of sentence simplification is to convert complex sentences into simpler ones so that they are more understandable and accessible, while still keeping their original information content and meaning. Sentence simplification has a number of practical applications .

First of all, it is useful for bilingual education and other language-learning contexts. Secondly, it can help patients with linguistic and cognitive disabilities [Carroll et al., 1999]. Sentence simplification can also be used to improve performance in other NLP tasks[<https://arxiv.org/pdf/1703.09013.pdf>]. [Chandrasekar et al., 1996; Knight and Marcu, 2000; Beigman Klebanov et al., 2004]

**Related Work:**

<https://arxiv.org/pdf/1804.07445.pdf> SentenceSimpliﬁcationwithMemory-AugmentedNeuralNetworks

<https://arxiv.org/pdf/1904.02767.pdf> Complexity-WeightedLossandDiverseReranking forSentenceSimpliﬁcation

<https://arxiv.org/pdf/1906.05483.pdf> Enriching Neural Models with Targeted Features for Dementia Detection

<https://arxiv.org/pdf/1411.4389.pdf> Long-term Recurrent Convolutional Networks for Visual Recognition and Description

<https://arxiv.org/pdf/1611.02344.pdf> A Convolutional Encoder Model for Neural Machine Translation

<https://arxiv.org/pdf/1503.01838.pdf> Encoding Source Language with Convolutional Neural Network for Machine Translation

<https://arxiv.org/pdf/1805.05557.pdf> Simplifying Sentences with Sequence to Sequence Models

<https://arxiv.org/pdf/1510.03820.pdf> A Sensitivity Analysis of (and Practitioners’ Guide to) Convolutional Neural Networks for Sentence Classification

<https://arxiv.org/pdf/1704.02312.pdf> A Constrained Sequence-to-Sequence Neural Model for Sentence Simplification

<https://arxiv.org/pdf/1703.10931.pdf> Sentence Simplification with Deep Reinforcement Learning

<https://arxiv.org/pdf/1703.09013.pdf> A Sentence Simplification System for Improving Relation Extraction

<https://arxiv.org/pdf/1609.03663.pdf> An Experimental Study of LSTM Encoder-Decoder Model for Text Simplification

<https://arxiv.org/pdf/1507.08452.pdf> Unsupervised Sentence Simplification Using Deep Semantics

Use cases

* Common models
* Our approach
* Why we chose that
* Our contribution