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MASTER'S THESIS PRESENTATION

Exploring Effectiveness and Alternatives of Attention Mechanism in Natural Language Processing

WHEN

May, 7th, 2021
8:00 AM, CDT

WHERE

Via ZOOM

ZOOM information will be provided in the email announcement for this seminar.

Russ Yoon, MS candidate



Attention mechanisms are used extensively in numerous natural language processing tasks, including sentiment analysis and neural machine translation. The first half of this paper compares the hierarchical sentiment analysis models HMCAN and HMMCAN to our modified versions and a generalized linear models baseline. Using only target attention for both word and sentence level hierarchy, the model can be streamlined without sacrificing the performance significantly. The second half of the paper compares the original Transformer and negative score ReLU attention-based Transformer on EN-FR and EN-DE translations. The result shows comparable performance of the original attention model and the dissimilarity-based non-linear attention model. Approaches to increasing the efficiency of the allocation of attention weights in the modified model is also illustrated.

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