STAP: Simultaneous Translation And Paraphrase

Progress Report for D1.5

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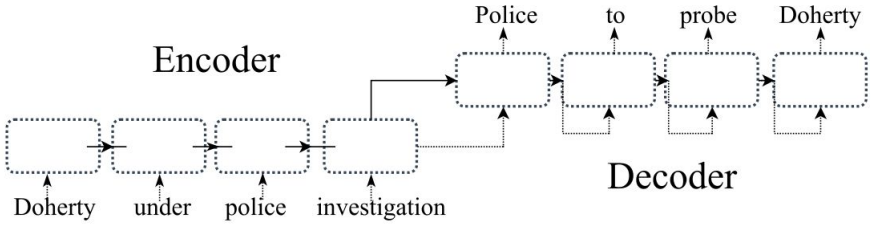
Introduction

In this report the progress on implementation of STAP will be reviewed. STAP - Simultaneous Translation And Paraphrase neural network model aimed at generating multiple semantically similar translations of an input text.

Model Implementation

During this week we have implemented the paraphrase model. It consists of Encoder-Decoder model, Residual LSTM network and we also added residual connections between LSTM layers. When stacking multiple layers of neurons, the network often suffers through a degradation problem. Residual connections can help overcome this issue. This allows for efficient training of deep LSTMs. The schema of our model is below:



The preliminary evaluation of the paraphrase model yielded following scores: BLEU=20.3, METEOR=23.1.
The model was implemented using Tensorflow framework.

Conclusion

This report sums up results of our research and presents our idea of the project implementation. In the following week we plan to continue implementation, which will follow Scrum methodology.

References

https://github.com/JiKook31/DL_project