

Report
Assignment 2
Advanced NLP

The model is trained from scratch using tensorflow (tf.keras).

Training:

To convert the words into tokens, tf.keras tokenizer is used. Then the Elmo model is created. First embedding layer is created. Then forward language model and backward language model is created. Then the embedding, first hidden layer and second hidden layer is added by giving them weighted sum. Then on top of the model, a softmax layer is created to predict the next word.

The data was divided into 8 sections so as to keep track of the training. While training the entire dataset as one, the training became untraceable. Therefore, training is done on these 8 chunks of the dataset.

Inference:

For testing the model, the embedding layer weights and hidden layer weights are extracted from the pretrained model and then extracted model is created to predict the required embeddings.

How to run the model:

To train the model from scratch, the train section of the jupyter notebook needs to be run. To predict the word embeddings, the inference section needs to be run.

File name:

elmo-assignment.ipynb

Model link: - https://drive.google.com/file/d/1WG-me8_wbWnJhHKqfLrKV8Y34N-cn4zd/view?usp=sharing