Univ.AI

NAMED ENTITY RECOGNITION

Ajinkya | Hemani | Rohit | shibani

MOTIVATION

to extract key information from scientific papers to enable search engines better select and filter articles.

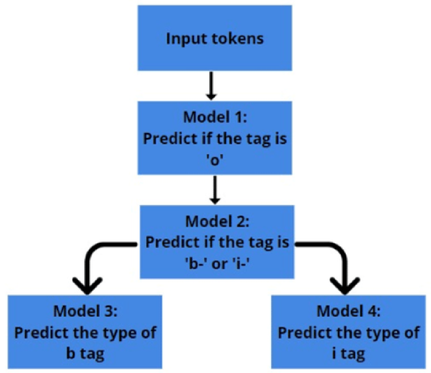
WIESP DATASET

REFERENCE

- https://medium.com/analytics-vidhya/named-entity-recognition-using-deep-learning-elmo-embedding-bi-lstm-48295bc66cab
- univ.ai : AI-3, labs and exercises

MODELS

- **Approach 1: Baseline and ELMO**
- **Approach 2: Custom_Model and Balanced_Custom_Model**



- **Approach 3: Bert base cased, implemented via simpletransformers**

RESULTS

Baseline model: 83%
(predicting just'o')
Elmo: 90%
(predicting 38 types of tags)
Custom_model: 83%
(predicting 26 classes)
Balanced_Custom_model:84%
(predicting 7 classes)
bert base cased but implemented via simpletransformers : 85%

CONCLUSION

We explored and looked into the difference the predictions that we got after seeing the ELMO model which had context incorporated into it, as compared to the baseline model.
We also examined the results that we got with the whole data, and when the 'O' tags were balanced to make the frequency comparable.

FUTURE WORK

To work on the custom model and the balanced custom model for better predictions.
Investigate more about the contextual embeddings, and to what level they play a role in the predictions.