Context-Dependent Embedding Utterance Representations for Emotion Recognition in Conversations

Patrícia Pereira
Instituto Superior Técnico / INESC-ID

CMU PORTUGAL SUMMIT 2022
NEW FRONTIERS IN TECH

Introduction

- Conversational context is extremely valuable for Emotion Recognition in Conversations (ERC)
- Current work uses complex classifier architectures to model context, applied after obtaining the embeddings
- But embeddings from pre-trained language models have powerful context representation capabilities
- So we propose Context-Dependent Embedding Utterance Representations (vs. context-independent + subsequent context modelling)

Results

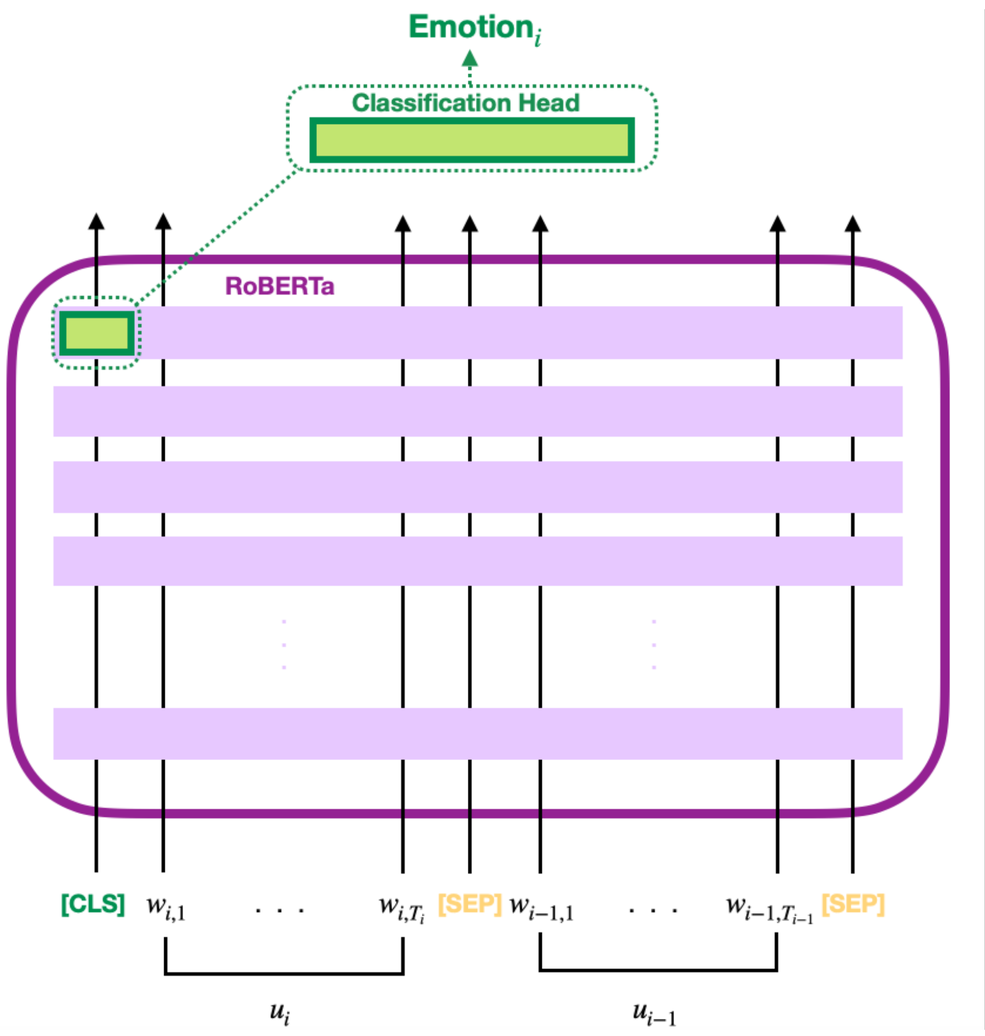
Model	F1
RoBERTa	48.20
RoBERTa DgRNN	49.65
COSMIC	51.05
Ours (c=3)	51.23
Psychological	**51.95**

Conclusions

- By leveraging Context-Dependent Embedding Utterance Representations, we obtained state-of-the art results on ERC with the *DailyDialog* dataset

Methods

- We feed the conversational context appended to the utterance to be classified as input to the RoBERTa encoder, to which we append a simple classification module
- We also investigate how the number of introduced conversational turns influences our model performance
- *DailyDialog* chit-chat dataset



Acknowledgements

This work was partially funded by Fundação para a Ciência e a Tecnologia under the scope of the CMU Portugal project MAIA Ref. 045909

Carnegie Mellon Portugal
fct Fundação para a Ciência e a Tecnologia
IST TÉCNICO LISBOA
inesc id lisboa