NLP Project 1

Multi-class sentiment analysis

This task is to use RNNs and word embeddings for analyzing sentiment in reviews of Amazon baby products. The reviews are rated from 1 to 5 and can be found in the files Amazon_Baby_train.txt and Amazon_Baby_test.txt. Try to use Tensorflow/Keras to:

1.) develop a sentiment analyzer for these Amazon reviews, which assigns a sentiment score $\in \{1,2,3,4,5\}$ to each review. The goal is to maximize the **accuracy**, present the result with a confusion matrix.

2.) develop a second sentiment analyzer with the goal to maximize the **mean** $F1$-value for the two classes 4 and 5.

3.) develop a third sentiment analyzer which maximizes the $F1$-value for class 1.

Hints:

- To get a feeling of your model performance think about a good baseline, for example: constant classifier
- It could be useful to implement some measures against imbalance in the target variables