

Findings Task 6

Team 11

Tudor Pitulice (234803)

Noah Ivanisevic (235738)

Zakariae El Moumni (226324)

During task 6, we were asked to complete a round translation of the episode the team chose. Because the language of the team was English, the round translation is not supposed to be included in the pipeline, and only completed for the academic experience and in order to experience the pain of understanding why the models are predicting gibberish. The csv file with the predictions can be found on GitHub with this [link](#). But, with this introduction in mind, hereby are the insights and a brief analysis of the mistakes made by our translation models.

Performance of the models

The team has trained 2 translation models using a pretrained BART transformer for Conditional Generation. First model was trained for translating text from English to Dutch, while the second model had the aim of finishing the round translation and translating the text back to English for evaluation. The notebook where both models are trained can be found [here](#). During the training phase of the model the English to Dutch model achieved on the training set 96.44% accuracy on the validation set and a loss of 0.19. The Dutch to English model achieved similar results with an accuracy of 94.94% and a loss of 0.46.

Thus, the models were used in a notebook „[round_translation.ipynb](#)” where the csv file was created. Even though the code left overnight for running due to the fact that the code is not fully optimized, the results were satisfactory.

Analysis of the errors

The round translation presents good results, where only 14 lines presented flaws from a total of 153 entries. That represents 9% of the dataset, however, most of the problems came when translating from Dutch to English when some words are changed and the meaning is slightly altered. Only one line has lost its meaning completely, due to the fact that in the video somebody shouted „100.000!” and after the round translation it shrank to 100. Thus, we can categorize the mistakes in 2 main sections:

Numerical difficulties: On line 72 of the csv file, the dutch model translated „100000” into „100”. On other instances of number appearing in text, the model handled them correctly, however on this case it shortened it by 3 zeroes.

Altering the wording of a phrase: In a couple of lines, the models changed the wording of the phrases, thus altering slightly the meaning of the sentence. This might not represent a major risk, since the change is done on deeper level. For example, on line 103 the corrected sentence is „I’m about to be plotting out here”, whereas the round translation is „I’m here making plans”. Even though, the main meaning remains the same that the character is making a plan to win the competition, the word „plotting” is holding much more negative energy than the phrase „making plans”. Thus, the corrected version is holding more character for the person in the episode.