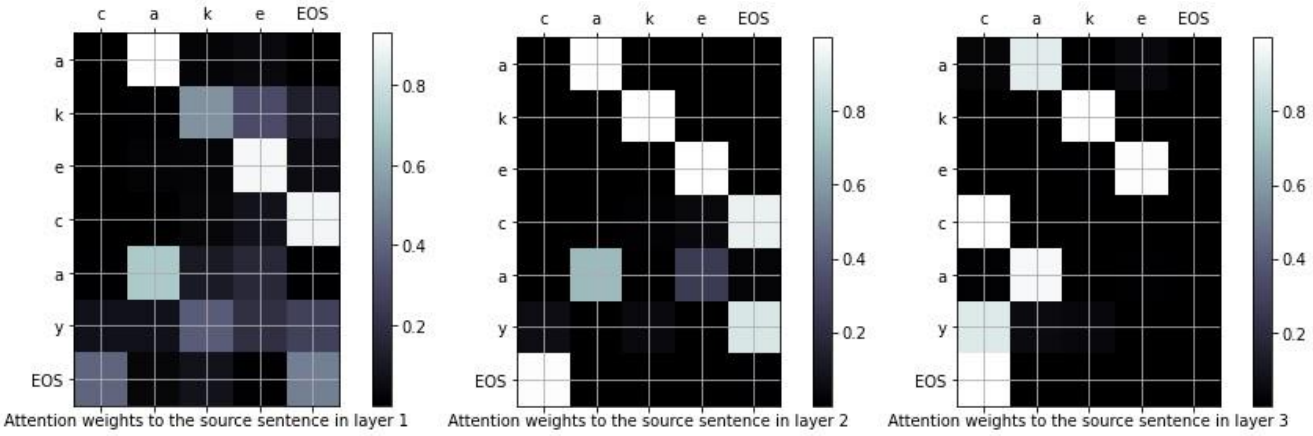
Steven Rud

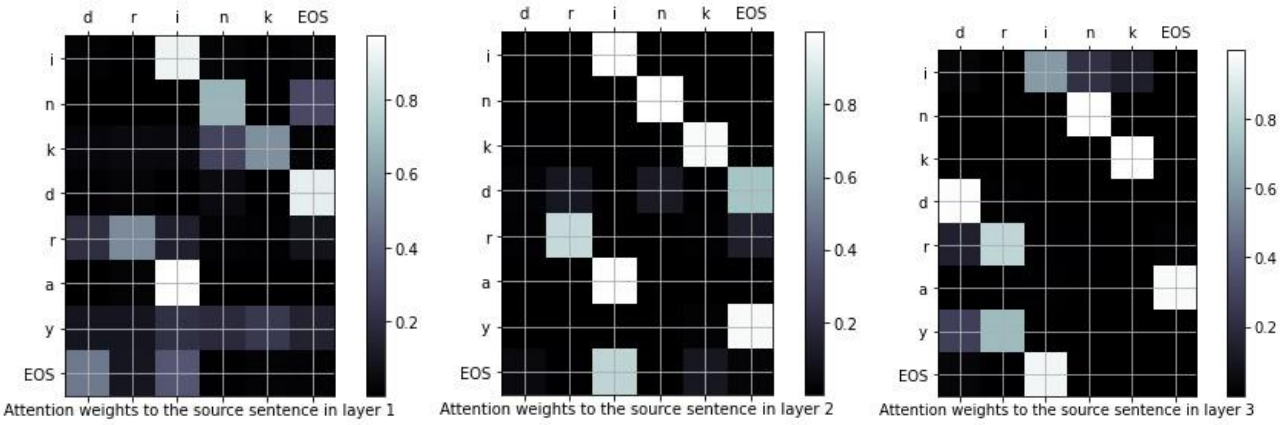
Write Up

Here are some attention maps for the success cases:

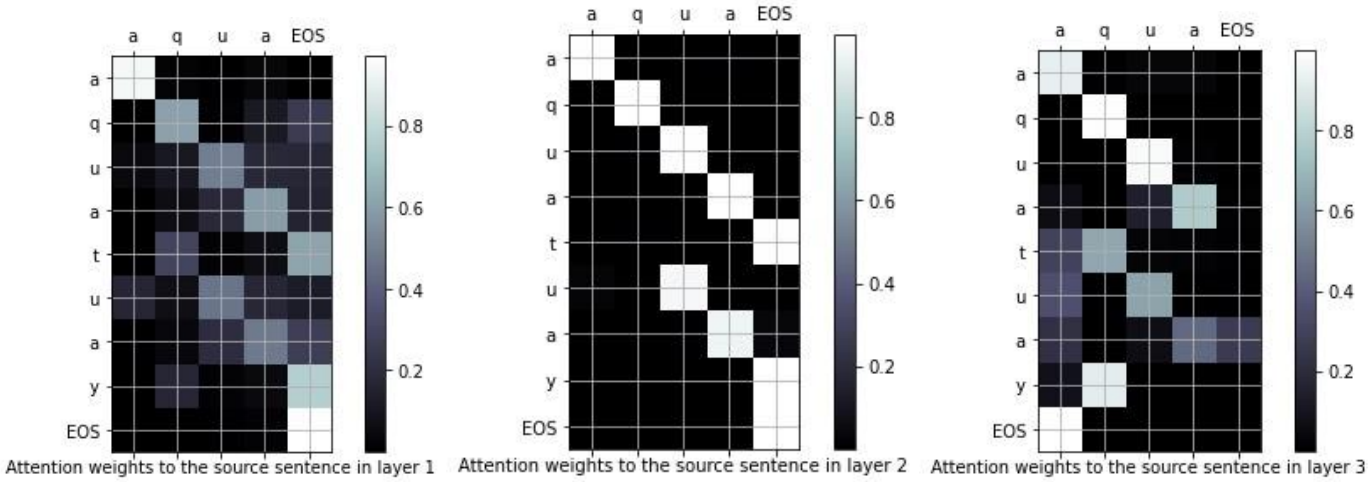
cake:



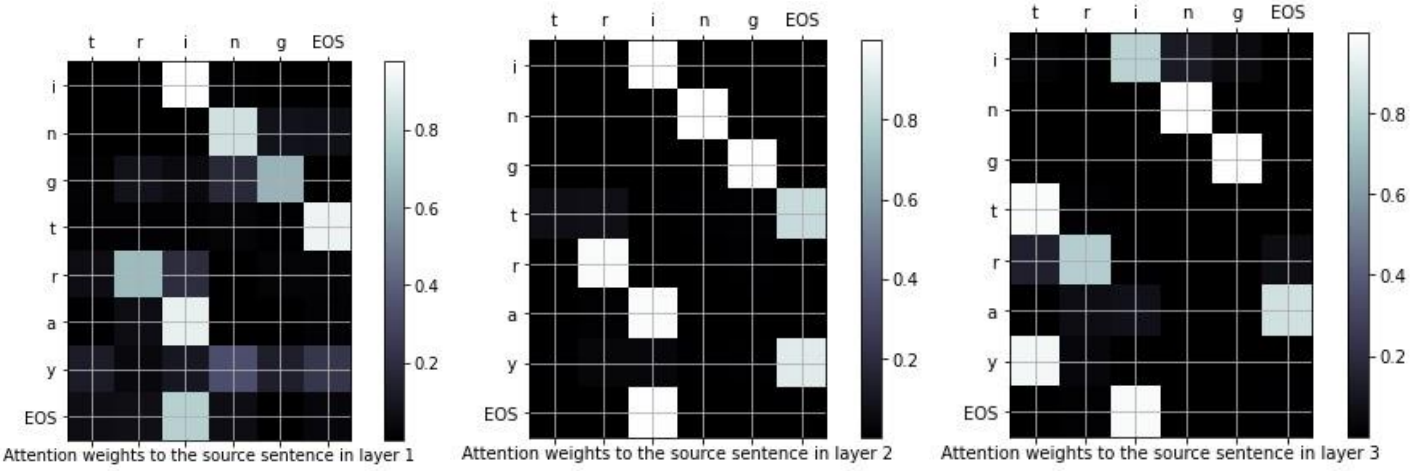
drink:



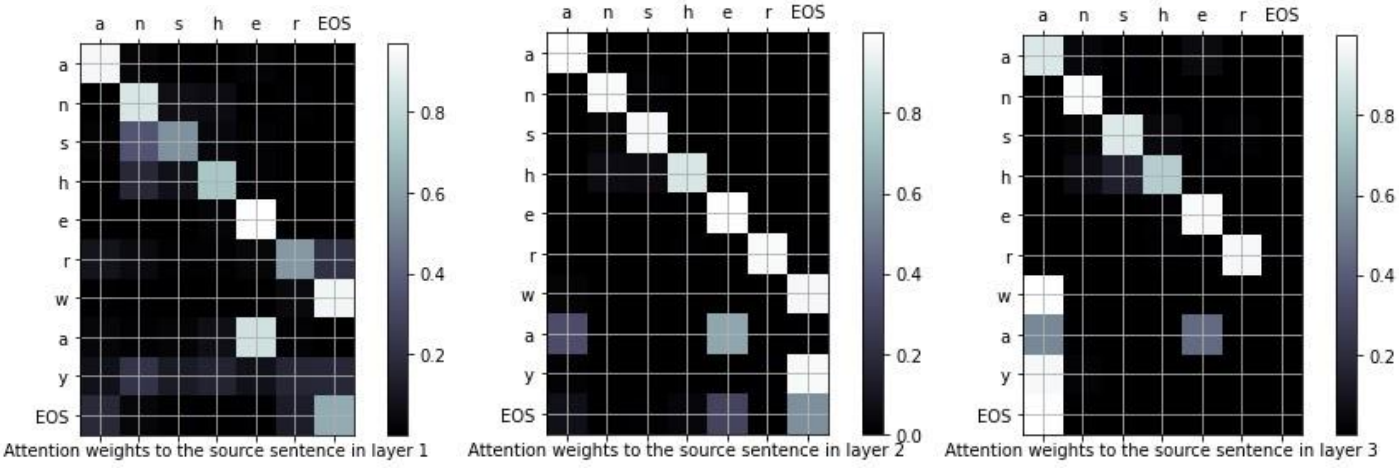
aqua (starting with vowel):



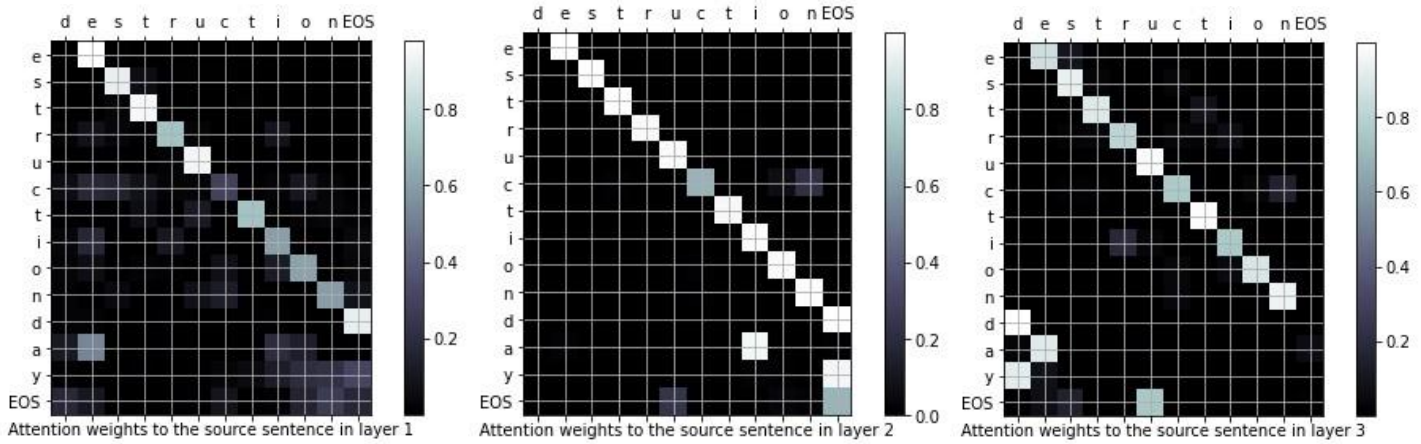
tring (a made-up word starting with a consonant):



ansher (a made-up word starting with a vowel):

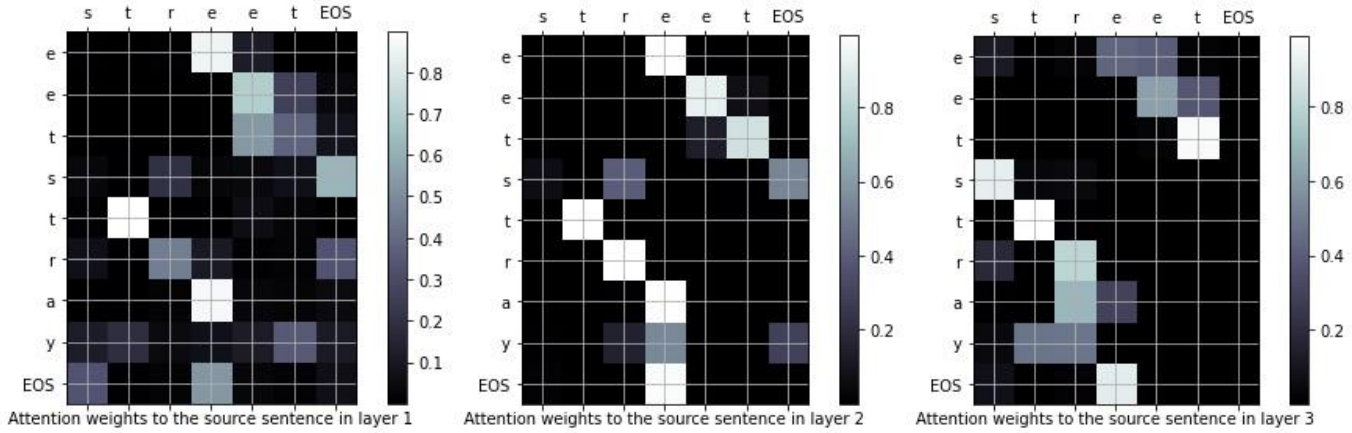


destruction (long word):

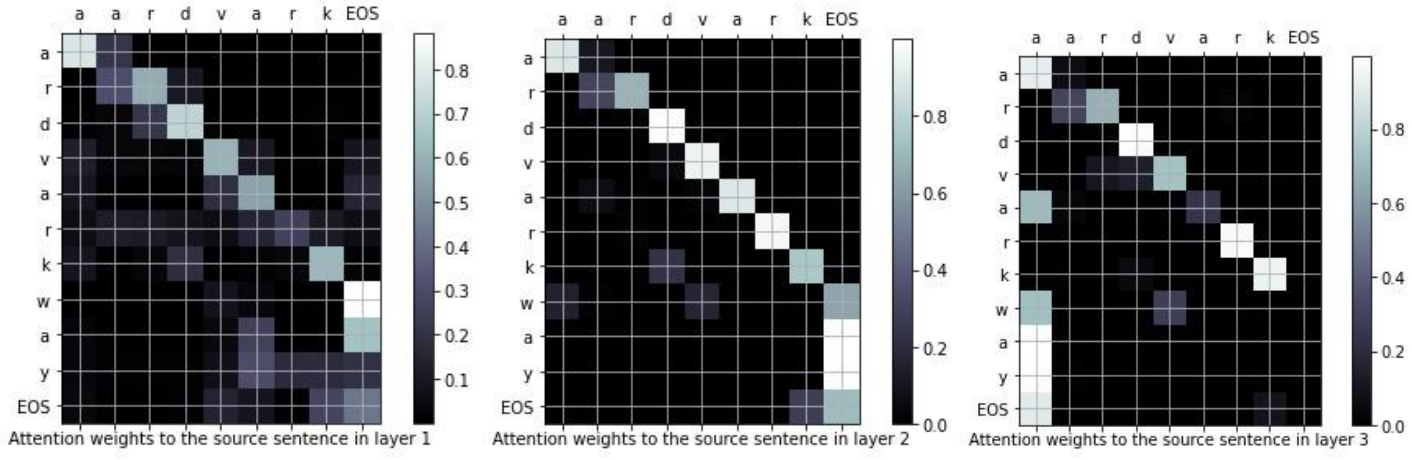


<u>Some successful cases include with slightly imperfect heatmaps:</u>

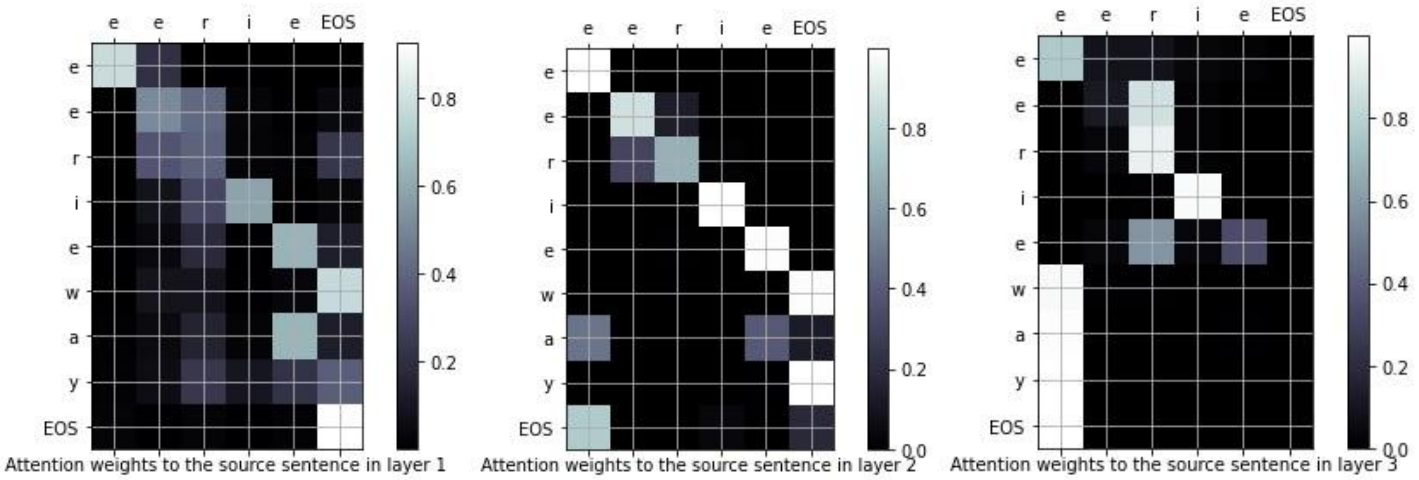
street (takes ‘str’ as a letter combination which is interesting):



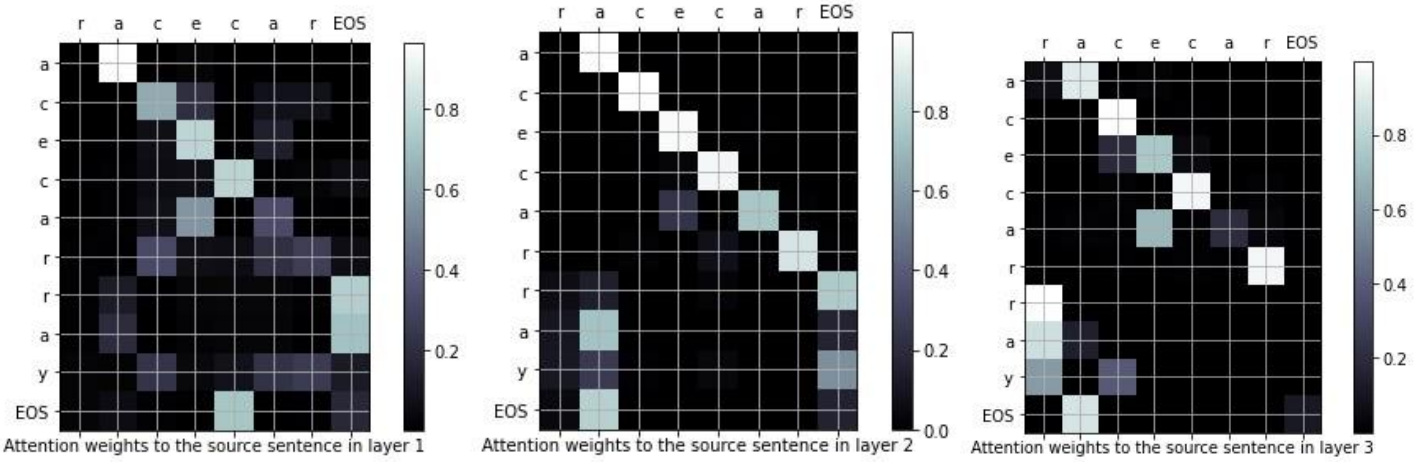
aardvark (unusual letter combination):



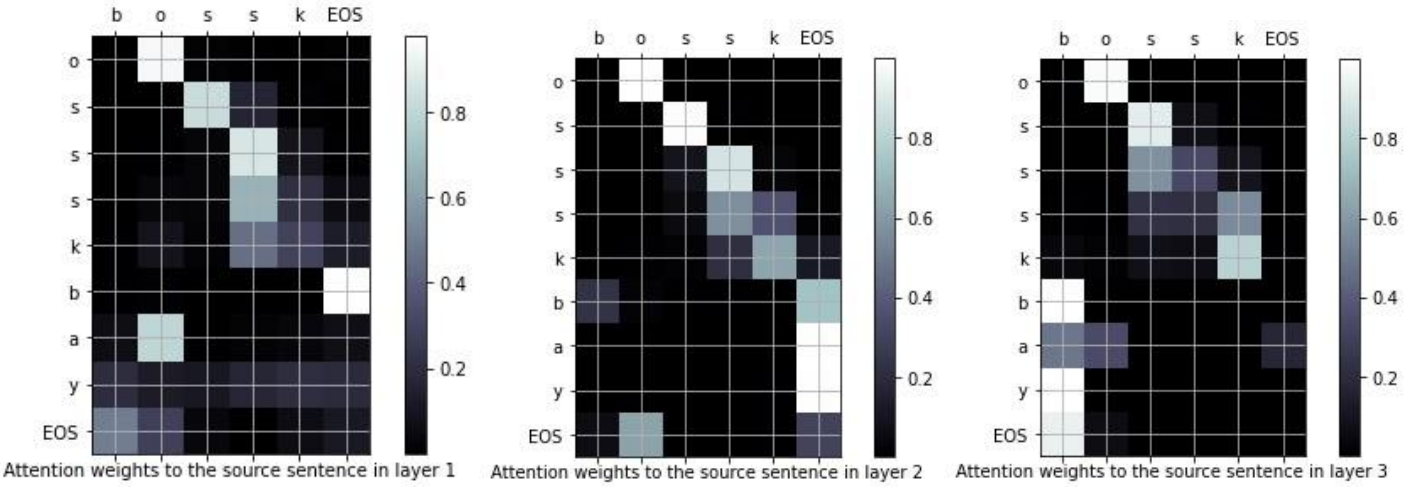
eerie (unusual letter combination):



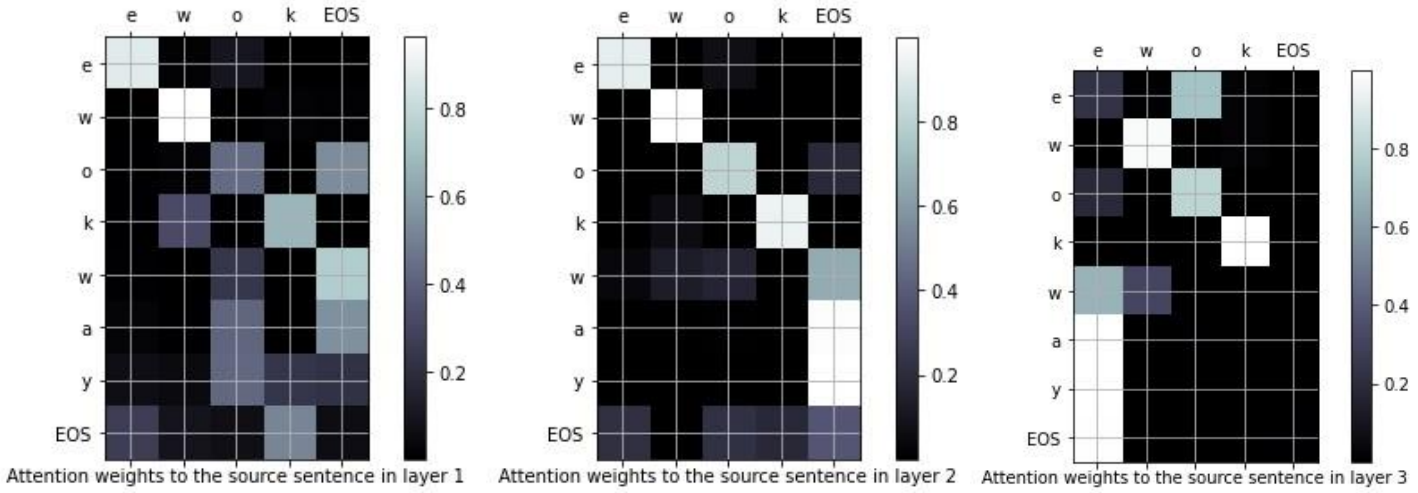
racecar (trying a palindrome):



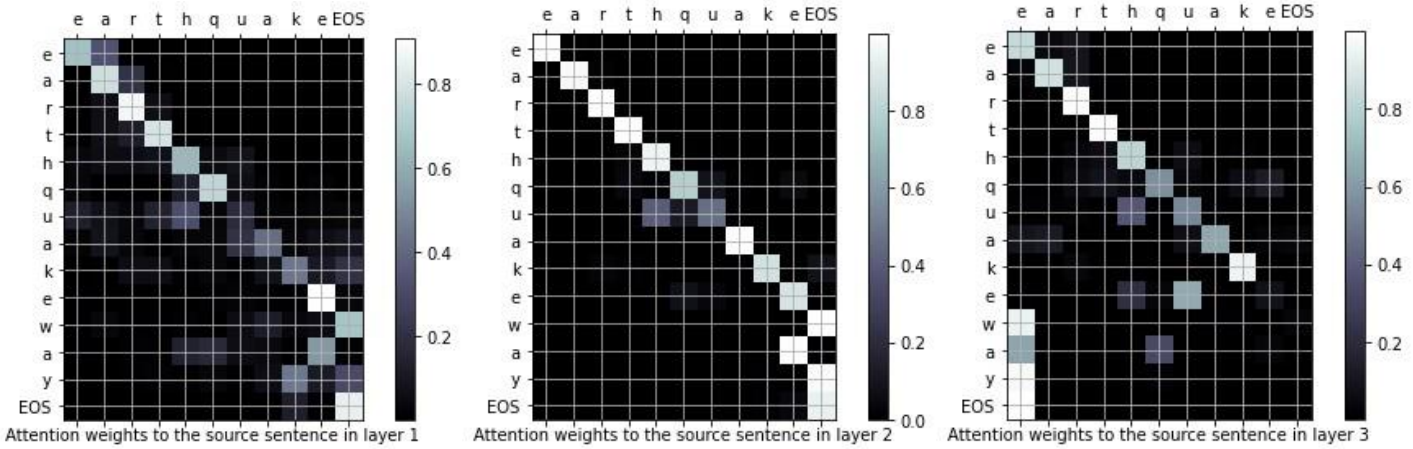
bossk (a made-up word):



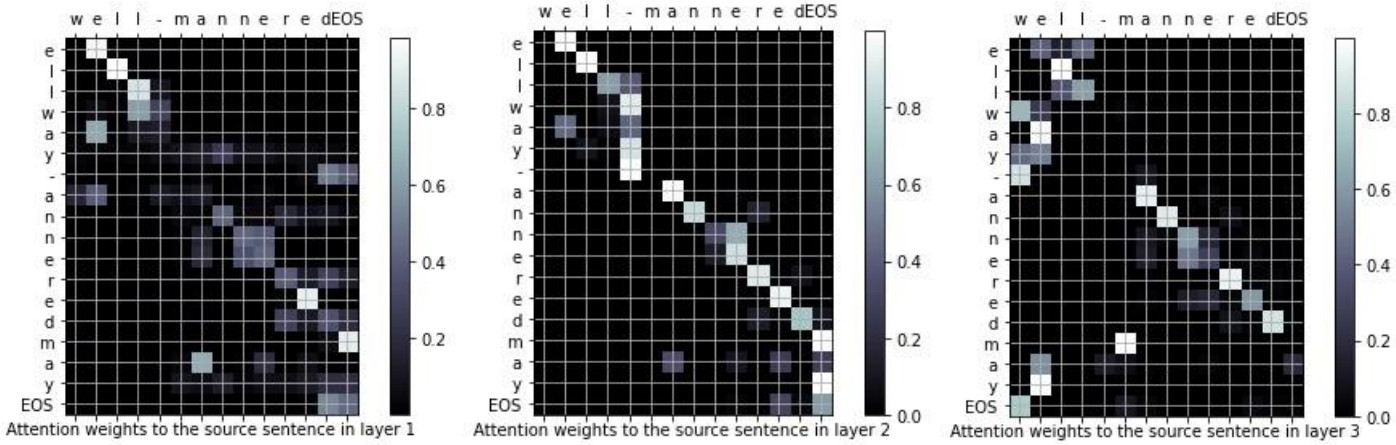
ewok (a made-up word starting with a vowel):



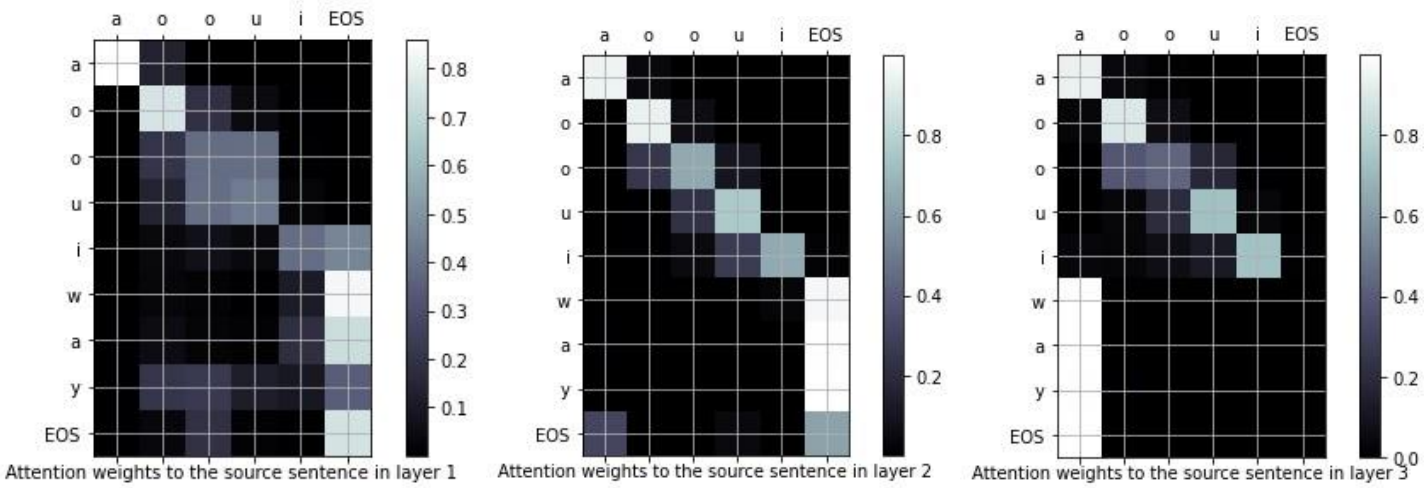
earthquake (long word):



well-mannered (using a dash):

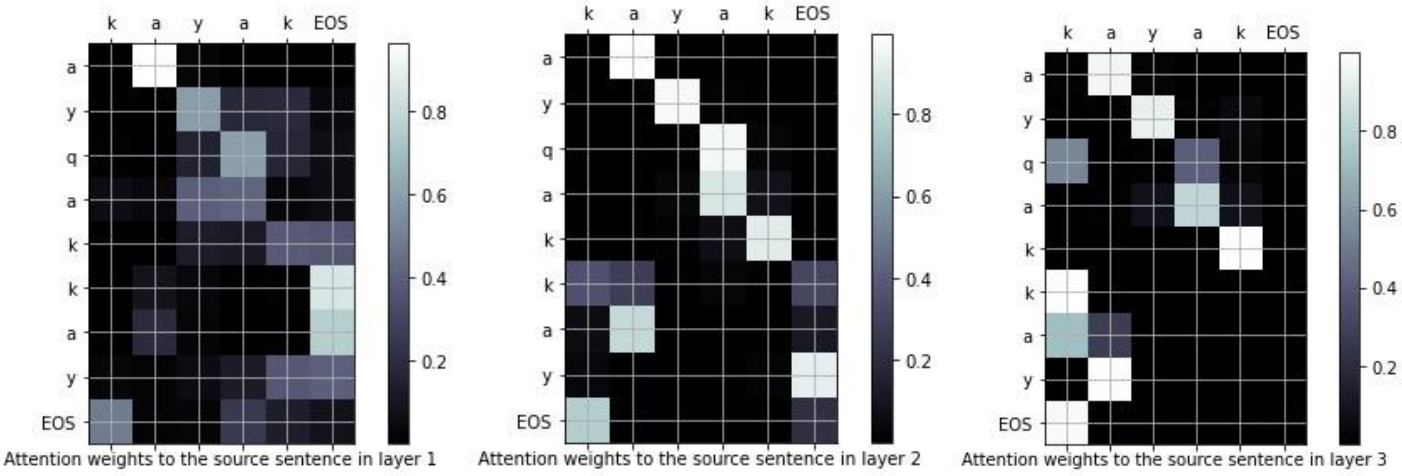


aooui (made-up word with only vowels):

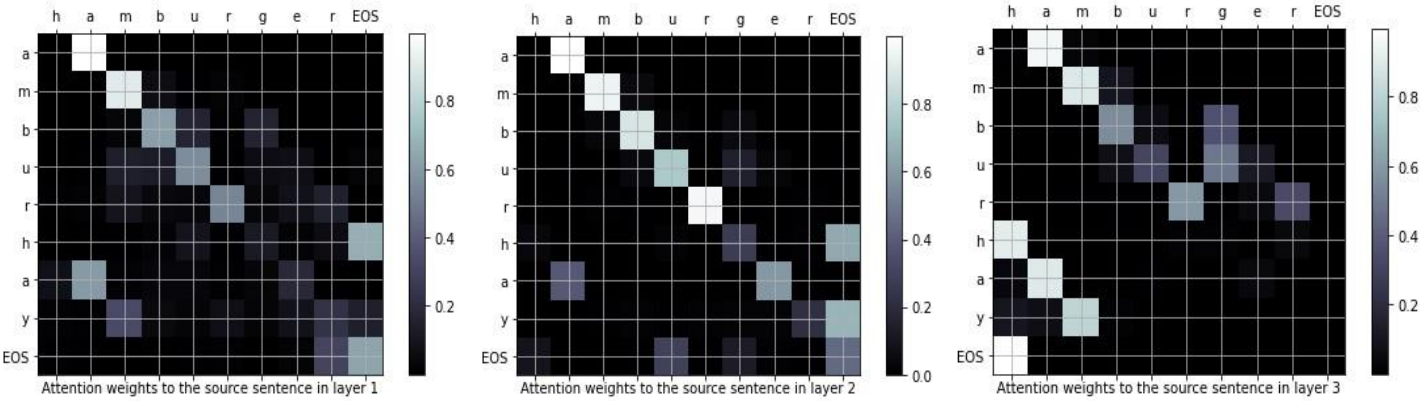


Failed cases: kayak

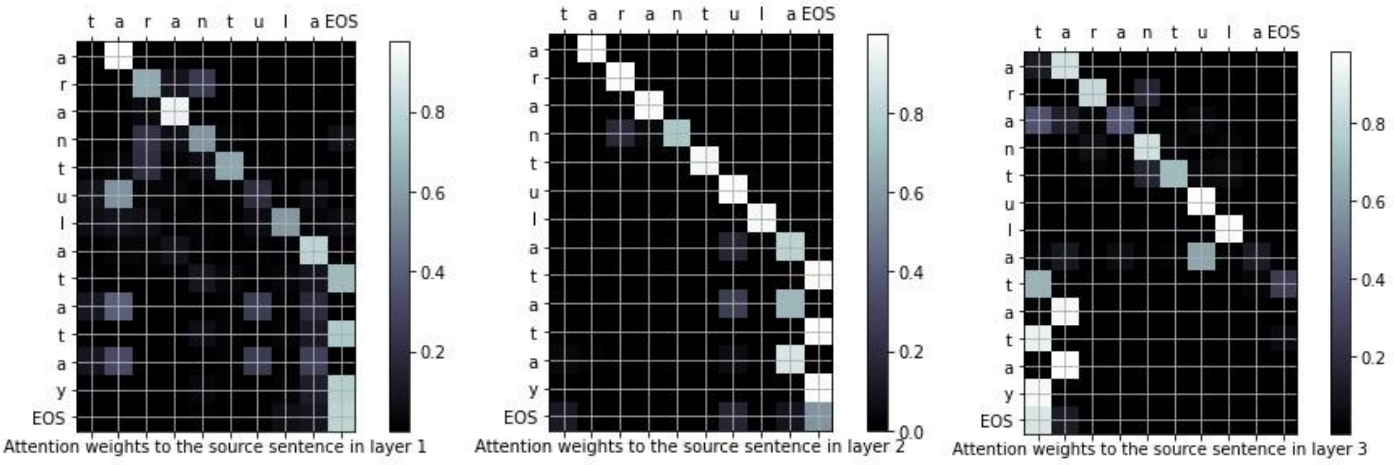
(a palindrome):



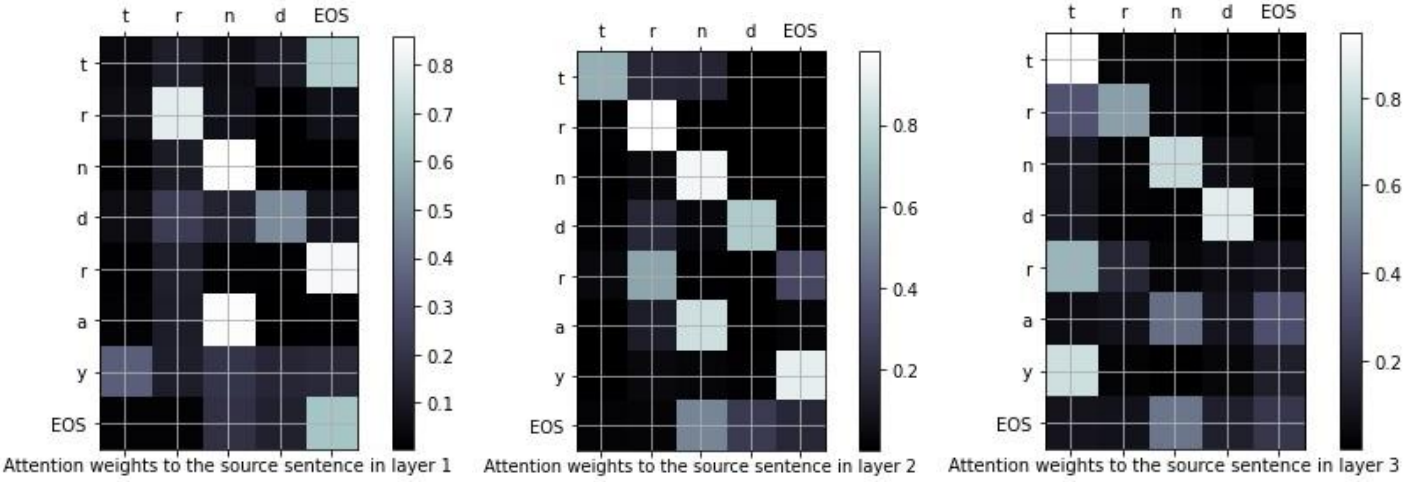
hamburger (longer word):



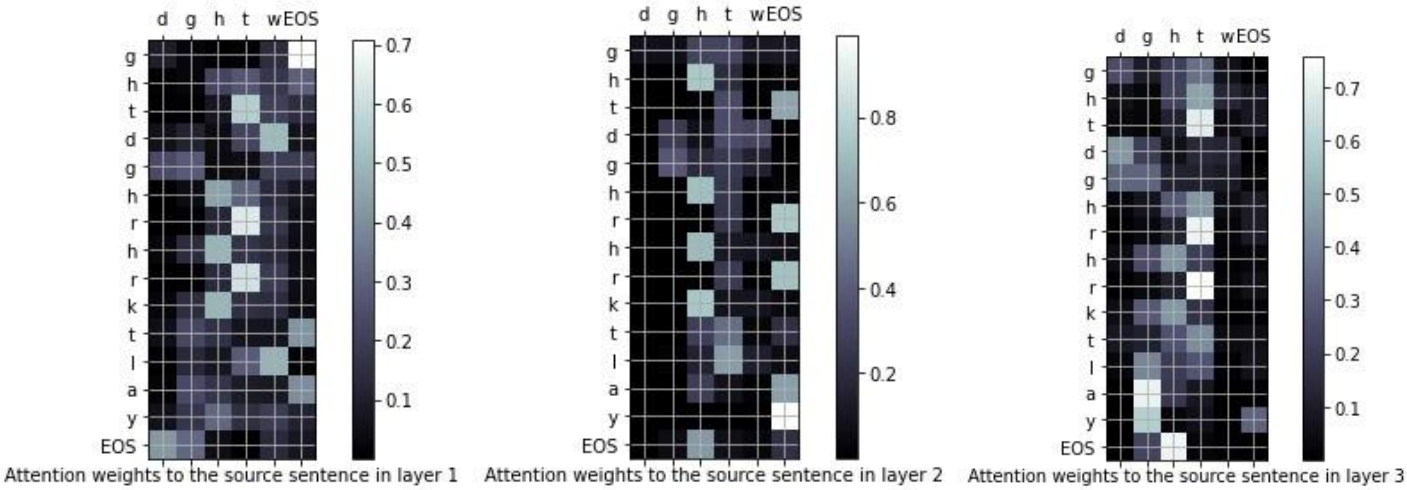
tarantula (a longer word):



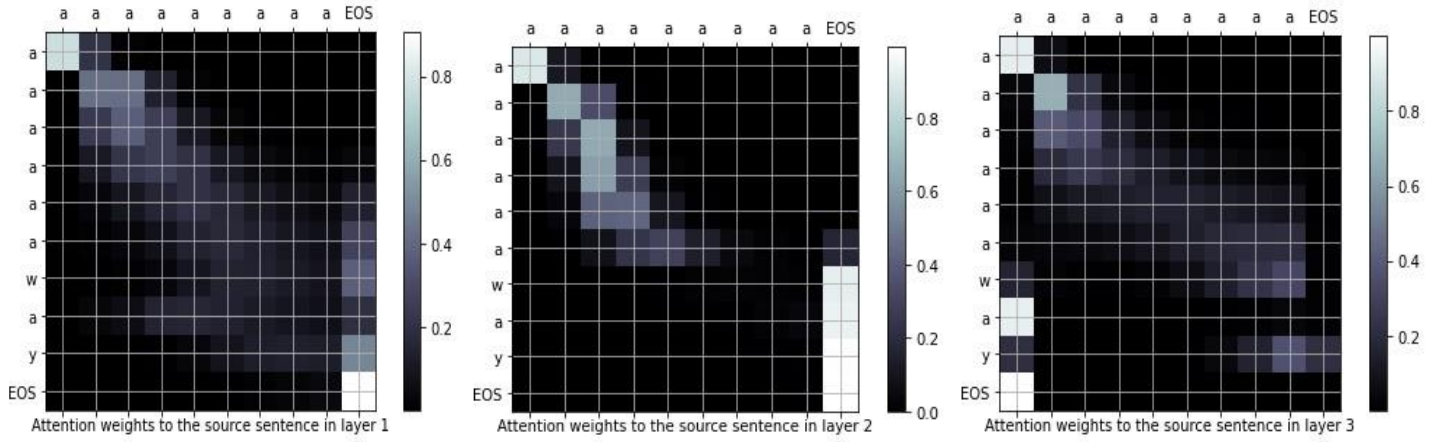
trnd (made-up word with only consonants):



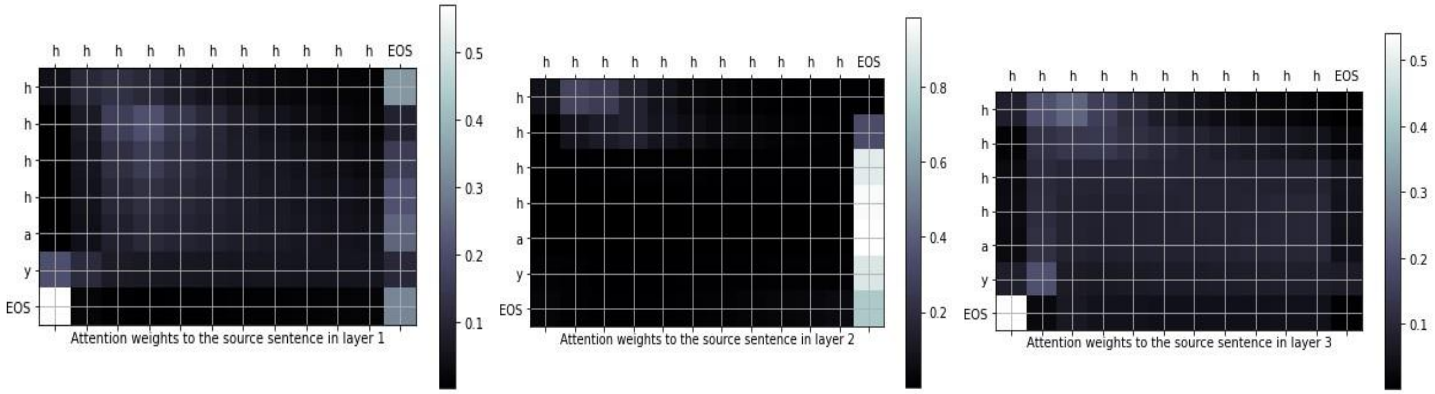
dghtw (made-up word with only consonants):



aaaaaaaaa (repeating a vowel):



hhhhhhhhhhh (repeating a consonant):



<u>Now finally, some possible reasons why the failed cases ended up failing include:</u>

Not diverse enough of a training set of data that could've led it to incorrectly interpreting certain combinations of letters leading to failures like in hamburger or kayak.

Overfitting may be a possibility due to it being trained for an excess amount of time causing it to fail with nuanced examples.

There could be some tweaking needed in the hyperparameters to better train the data or perhaps this is an error in the code that I implemented myself that led to some of these specific failures.

Or lastly, very simply the model has limitations on these overly complex examples such as in repeating vowels/constants or made-up words with only consonants. The model may struggle picking up letter combinations on these ambiguous examples leading to incorrect translations.