

CART 498

Assignment 2

Short Essay - Self Reflection

Eamon Foley

Student ID: 40233231

In this assignment, altering the X value for the P+X replacement algorithm modified the overall coherence and sensicality of each line of the poem. Thus, as you increase the value of X, the poem strays further and further from what may be deemed logical in terms of the model's understanding of semantic meaning, and syntactic structure. As readers however, this results in a fun and interesting twist to the terminating noun of each line of a poem, which is already somewhat abstracted from 'logical' sentence structure. For my experiment, I chose X = 699. I chose this as I thought it would result in something very far from the original word, replacing things like 'snow' with 'crab' and 'ice' with gang.

In terms of implementing a P+7 technique for all nouns, we must first come up with some algorithm to determine what constitutes a noun, or more appropriately, use an existing library that is able to perform this described token classification. Based on what I could find available online, hugging face has a couple options for this, where different labels can be assigned to single tokens, or groups of tokens depending on your desired task. For word type classification specifically, I was able to find [this](#) model, fine tuned for POS (part of speech) tagging, which is able to classify and isolate nouns. By using this library, we could then implement the rest of the logic, which is highly similar to the original task of this assignment. Personally, my approach would be to break the whole poem down into lines, then for each line, split the line into a list of words. Then, by iterating through the list of individual words, we can apply the POS tagging library to the word. IF the word is classified as a noun, we can apply the same prediction algorithm that was used for the P+X task to the noun. Once we know what the predicted noun is, we can replace the original noun with the predicted noun and re-concatenate the line. We can repeat these steps for each line while appending each modified line to the last, to create an entirely new poem, with each noun replaced with the N+7 technique.