

I used Keras in Tensorflow using python to make a perceptron. The layers consist of an input of 14 and then dense layers of size 125, 50, 50, 50, 30, and 1. Each layer except the last has a relu activation. I manually select the ratio of 1's and 0's in the output by inputting the ratio, finding the middle value to create the ratio, and then making the array of 1'0 and 0'0. The ratio is decided by fine tuning. I used 10 epochs.

Here are my features:

- `diff_number_of_words`
 - difference in length
- `amount_of_same_words`
 - uses the number of words that are equal
- `amount_of_different_words`
 - uses the number of words that are not equal
- `has_number`
 - if one of the sentences has a number it returns 1
- `both_has_number`
 - if both sentences have a number is returns 1
- `diff_num_of_number`
 - Uses difference of number of numbers in each sentence
- `is_there_two_periods`
 - I put this in to help find the concatenated sentences
- `largest_same_subset`
 - returns the length of the largest subset
- `has_quote`
 - If one of the sentences has a double quote, it returns 1
- `both_has_quote`
 - If both sentences have a double quote, it returns 1
- `average_subset_length`
 - Attempts to find subsets until there is not any and returns the average length
- `num_subsets`
 - Uses number of subsets that can be found
- `amount_different_nums`
 - Tries to find numbers and then finds if any of them are different returns a higher number the more different numbers there are