CIS 4930 NLP // HW #9 // Spring 2018

Date Assigned: March 30, 2018
Date Due: April 6, 2018

Submission Format

You will submit a soft copy of your solution using e-Learning (http://elearning.ufl.edu) by the end of the day (23:59 / 11:59 PM) on the assigned date (April 6). Submit one file, **hw9.py**.

Assignment

At the top of every solution file you submit this semester include: your name, section number, the assignment number, and the date due. Complete the following exercises.

Exercises

1. Create the method *precision*. The method will receive a gold standard tagged text (i.e. we know it is correctly tagged), another tagged set of text for testing, and a part of speech tag. Compare, word/tag by word/tag to the gold standard to find statistic values. Return the precision. You may assume the gold standard and testing set are the same sequence of words. Of course they will only be the same sequence of tags when the testing set is 100% tagged correctly. Note, since the function is finding the precision for the labelling of a specific tag, you only need to construct the two-by-two table. Anything assigned the tag label correctly (the one passed to the function) would be a TP and all other correct assignments of tags will be the set of TNs.

2. Create the method *recall*. The method will receive a gold standard tagged text (i.e. we know it is correctly tagged), another tagged set of text for testing, and a part of speech tag. Compare, word/tag by word/tag to the gold standard to find statistic values. Return the recall. You may assume the gold standard and testing set are the same sequence of words. Of course they will only be the same sequence of tags when the testing set is 100% tagged correctly. Note, since the function is finding the recall for the labelling of a specific tag, you only need to construct the two-by-two table. Anything assigned the tag label correctly (the one passed to the function) would be a TP and all other correct assignments of tags will be the set of TNs.

3. Create the method *fMeasure*. The method will receive a gold standard tagged text (i.e. we know it is correctly tagged), another tagged set of text for testing, and a part of speech tag. Compare, word/tag by word/tag to the gold standard to find statistic values. Return the F-Measure. You may assume the gold standard and testing set are the same sequence of words. Of course they will only be the same sequence of tags when the testing set is 100% tagged correctly. Note, since the function is finding the f-measure for the labelling of a specific tag, you only need to construct the two-by-two table. Anything assigned the tag label correctly (the one passed to the function) would be a TP and all other correct assignments of tags will be the set of TNs.