Information Retrieval and Text Mining

Assignment 1

Course Instructor: Dr. Iqra Safder

Due 14, October, 2021, 11:59 pm   Fall 2021

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1. Make sure to read the instructions carefully before attempting them.

2. You are allowed to discuss with TA for general advice.

3. You must submit your own work on Google Classroom.

4. **Plagiarism will be not tolerated**. Penalty will be decided later on.

5. You have to code your logic in attached python notebook

6. Submit your notebook renamed as RollNumber_01.ipynb (Make sure it is renamed with your roll number for example MSDS20001_01.ipynb)

7. If you do not have anaconda installed, you can use google colab.

8. The code must be very clear, to-the-point, and presentable. We will not just be looking for correct answers rather highest grades will be awarded to write-ups that demonstrate a clear understanding of the material. Write your solutions as if you were explaining your answer to a colleague. Style matters and will be a factor in the grade.

Tasks:

1. Read the file and find total occurrences of word

    1.1 Write a function that reurns count of number of lines in txt file

    1.2 Write a function that reurns count of number of words in txt file

2. Write a function that reurns a dataframe with two columns having stop words in one col and their count in the other.

3. Now generate a txt file named Rollnumber.txt having all content of the given file but excluding stopwords.

4. Write a function that displays all words having length greater than 5.

5. Write a function that returns the count of all words which end at y.

6. Write a function that prints the count of lowercase letters in the file.

7. Write a function to replace all "the" with "thee".

8. Write a function ZICount() to count all occurences of Z and I (including small cases a and i too).
   For example: Hi! I am Zenia. It was so good to see you!
   Output:
   I or i : 4
   Z or z : 1

9. Write a function to display the content of a file in dscending order (based on the word count).
   Content: I am confused to start it but it won't be done until I give it a try
   Output: it I to a am be confused done give start try until wont.

10. Write a function alter_Upper that modifies the content in a way that the first line is in Upper case, second in lower case and so on.

    Example:

    I am Zenia

    I love painting

    I live in Pakistan

    Output:

    i am zenia

    I LOVE PAINTING

    i live in pakistan

Good Luck!