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1 import sqlite3
2 import numpy as np
3 import time
4 t0=time.time()
5
6 db = sqlite3.connect('data/thdb')
7 cursor = db.cursor()
8
9 punc = '!"#$%&\'()*+,-./:;<=>?@[\\]^_`{|}~\'...—'
10 stopWordsNoP = ["rt", "a", "about", "above", "after", "again", "against", "all", "am", "an", "and", "any", "are", "arent", "as", "at", "be", "because", "been", "before", "being", "below", "between", "both", "but", "by", "cant", "cannot", "could", "couldnt", "did", "didnt", "do", "does", "doesnt", "doing", "dont", "down", "during", "each", "few", "for", "from", "further", "had", "hadnt", "has", "hasnt", "have", "havent", "having", "he", "hed", "hell", "hes", "her", "here", "heres", "hers", "herself", "him", "himself", "his", "how", "hows", "i", "id", "ill", "im", "ive", "if", "in", "into", "is", "isnt", "it", "its", "its", "itself", "lets", "me", "more", "most", "mustnt", "my", "myself", "no", "nor", "not", "of", "off", "on", "once", "only", "or", "other", "ought", "our", "ours", "ourselves", "out", "over", "own", "same", "shant", "she", "shed", "shell", "shes", "should", "shouldnt", "so", "some", "such", "than", "that", "thats", "the", "their", "theirs", "them", "themselves", "then", "there", "theres", "these", "they", "theyd", "theyll", "theyre", "theyve", "this", "those", "through", "to", "too", "under", "until", "up", "very", "was", "wasnt", "we", "wed", "well", "were", "weve", "were", "werent", "what", "whats", "when", "whens", "where", "wheres", "which", "while", "who", "whos", "whom", "why", "whys", "with", "wont", "would", "wouldnt", "you", "youd", "youll", "youre", "youve", "your", "yours", "yourself", "yourselves"]
11
12 def stopWordRemover (text, swords):
13     return list(set([word for word in text.split() if word.lower() not in swords]))
14
15 def linkRemover (text):
16     return list(set([word for word in text.split() if not (word.lower().startswith('www.') or word.lower().startswith('http'))]))
17
18 cursor.execute(''SELECT tweet, class FROM tweetsTest'')
19 testSet = cursor.fetchall()
20
21 trueHillary = 0
22 falseHillary = 0
23 trueTrump = 0
24 falseTrump = 0
25
26 for row in testSet:
27     tweet = row[0]
28     tweetNP = tweet.translate(str.maketrans("", "", punc))
29     tweetNPSW = ' '.join(stopWordRemover(tweetNP, stopWordsNoP))
30     testString = ' '.join(linkRemover(tweetNPSW))
31
32     cHil = np.empty(0)
33     cTru = np.empty(0)
34
35     for word in testString.split():
36         w = cursor.execute("SELECT EXISTS(SELECT 1 FROM wordsp WHERE word = ?)", (word,))

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37         if w.fetchone()[0]:
38             cursor.execute(''SELECT phil FROM wordsp WHERE word = ?'', (
word,))
39             phil = cursor.fetchall()[0][0]
40             cHil = np.append(cHil, [phil])
41             cursor.execute(''SELECT ptru FROM wordsp WHERE word = ?'', (
word,))
42             ptru = cursor.fetchall()[0][0]
43             cTru = np.append(cTru, [ptru])
44
45         cHil = np.prod(cHil)
46         cTru = np.prod(cTru)
47
48         chances = np.array([cHil, cTru])
49         max = chances.max()
50         if max == cHil:
51             if str(row[1]) == "HillaryClinton":
52                 trueHillary +=1
53             elif str(row[1]) == "realDonaldTrump":
54                 falseHillary +=1
55         elif max == cTru:
56             if str(row[1]) == "realDonaldTrump":
57                 trueTrump += 1
58             elif str(row[1]) == "HillaryClinton":
59                 falseTrump += 1
60         else:
61             print("Something is seriously wrong!")
62             print("Label was "+str(row[1]))
63
64     print("trueHillary = "+str(trueHillary))
65     print("falseHillary = "+str(falseHillary))
66     print("trueTrump = "+str(trueTrump))
67     print("falseTrump = "+str(falseTrump))
68
69     accuracy = (trueHillary+trueTrump)/(trueHillary+trueTrump+falseHillary+
falseTrump)
70     print(accuracy)
71
72     db.close()
73     t1 = time.time()
74     print("Total time: "+str(t1-t0))

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