import numpy as np

import matplotlib.pyplot as plt

import pandas as pd

import urllib.request

dataset = pd.read\_csv("Restaurant\_Reviews.tsv",delimiter = "\t", quoting = 3)

import re

import nltk

nltk.download('stopwords')

from nltk.corpus import stopwords

from nltk.stem.porter import PorterStemmer

corpus = []

corp = []

for i in range(0,3013):

review = re.sub('[^a-zA-Z]', ' ', dataset['Review'][i])

review = review.lower()

review = review.split()

ps = PorterStemmer()

review = [ps.stem(word) for word in review if not word in set(stopwords.words('english'))]

review = ' '.join(review)

corpus.append(review)

from sklearn.feature\_extraction.text import CountVectorizer

cv = CountVectorizer(max\_features = 1500)

X = cv.fit\_transform(corpus).toarray()

y = dataset.iloc[:,1].values

from sklearn.cross\_validation import train\_test\_split

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size = 0.20, random\_state = 0)

from sklearn.naive\_bayes import GaussianNB

classifier = GaussianNB()

classifier.fit(X\_train, y\_train)

# Predicting the Test set results

y\_pred = classifier.predict(X\_test)

# Making the Confusion Matrix

from sklearn.metrics import confusion\_matrix

cm = confusion\_matrix(y\_test, y\_pred)

print ("\n\nConfusion Matrix:\n", cm)

print("Accuracy:", classifier.score(X\_test, y\_test)\*100, "%")

def check(r):

rev = re.sub('[^a-zA-Z]', ' ', r)

rev = rev.lower()

rev = rev.split()

ps = PorterStemmer()

rev = [ps.stem(word) for word in rev if not word in set(stopwords.words('english'))]

rev = ' '.join(rev)

corpus.append(rev)

a = cv.fit\_transform(corpus).toarray()

y\_new = classifier.predict(a)

a = y\_new[-1]

return str(a)

import requests

import urllib

access\_token = '8911134469.1efef08.29bd2a882e594528b11ac2aaa137adf9'

base\_url = 'https://api.instagram.com/v1/'

def self\_info():

url\_req = base\_url+"users/self/?access\_token="+access\_token

x = requests.get(url\_req)

user\_info = x.json()

if user\_info['meta']['code'] == 200:

if len(user\_info['data']):

print ('\nUsername: %s' % (user\_info['data']['username']))

print ('No. of followers: %s' % (user\_info['data']['counts']['followed\_by']))

print ('No. of people you are following: %s' % (user\_info['data']['counts']['follows']))

print ('No. of posts: %s' % (user\_info['data']['counts']['media']))

else:

print ('User does not exist!')

else:

print( 'Status code other than 200 received!')

def get\_user\_id(insta\_username):

request\_url = (base\_url+'users/search?q=%s&access\_token=%s') % (insta\_username , access\_token)

user\_id = requests.get(request\_url).json()

if user\_id['meta']['code'] == 200:

if len(user\_id['data']):

return user\_id['data'][0]['id']

else:

return None

else:

print ("Status code other than 200 received.")

def get\_user\_info(insta\_username):

user\_id = get\_user\_id(insta\_username)

if user\_id == None:

print ("User with the given name does not exist.You are being sent back to the HOME!")

start\_bot()

request\_url = (base\_url+'users/%s?access\_token=%s') % (user\_id, access\_token)

user\_info = requests.get(request\_url).json()

if user\_info['meta']['code'] == 200:

if len(user\_info['data']):

print ("Username: %s" % (user\_info['data']['username']))

print ('No. of followers: %s' % (user\_info['data']['counts']['followed\_by']))

print ('No. of people you are following: %s' % (user\_info['data']['counts']['follows']))

print ('No. of posts: %s' % (user\_info['data']['counts']['media']))

else:

print ('There is no data for this user!')

else:

print ('Status code other than 200 received!')

def get\_own\_post():

request\_url = (base\_url + 'users/self/media/recent/?access\_token=%s') % access\_token

own\_media = requests.get(request\_url).json()

if own\_media['meta']['code'] == 200:

if len(own\_media['data']):

c = True

# loop to avoid crashes on invalid insertion

while c:

x = 1

c = False

# downloading the post

if own\_media['data'][x-1]['type' ]== 'image':

post\_name = own\_media['data'][x-1]['id']

# request unsuccessful

else:

print ('Status code other than 200 received!')

return(post\_name)

# function to access user posts and downloading

def get\_user\_post(insta\_username):

# calling function to get user-id

user\_id = get\_user\_id(insta\_username)

# if user doesnt exit

if user\_id == None:

print ('User does not exist!')

start\_bot()

request\_url = (base\_url + 'users/%s/media/recent/?access\_token=%s') % (user\_id, access\_token)

user\_media = requests.get(request\_url).json()

if user\_media['meta']['code'] == 200:

if len(user\_media['data']):

c = True

while c:

answer = input( 'Do you want to get the latest post? Reply: Y/N' )

if answer.upper() == 'Y':

x = 1

c = False

elif answer.upper() == 'N':

print ('Choose from the following\n')

print ("2. Second last post\n3. Third last post..\nand so on..")

x = input()

if x.isdigit():

if x <= len(user\_media['data']) :

x = int(x)

c = False

else:

print ('This post does not Exist!!')

else:

print ('You did not choose appropriate option. Try again!')

# when user entered something except y and n

else:

print ('Press only y or n!!')

c = True

# downloading the post

if user\_media['data'][x-1]['type']== 'image':

post\_name = user\_media['data'][x-1]['id'] + '.jpeg'

post\_url = user\_media['data'][x-1]['images']['standard\_resolution']['url']

urllib.request.urlretrieve(post\_url, post\_name)

print ('Your image has been downloaded!')

else:

post\_name = user\_media['data'][x-1]['id'] + '.mp4'

post\_url = user\_media['data'][x-1]['videos']['standard\_resolution']['url']

urllib.urlretrieve(post\_url, post\_name)

print ('Your video has been downloaded!')

else:

print ('Post does not exist!')

else:

print ('Status code other than 200 received!')

def get\_post\_id(insta\_username):

user\_id = get\_user\_id(insta\_username)

if user\_id == None:

print ('User does not exist!\n You are being sent back to the HOME!!')

start\_bot()

request\_url = (base\_url + 'users/%s/media/recent/?access\_token=%s') % (user\_id, access\_token)

user\_media = requests.get(request\_url).json()

if user\_media['meta']['code'] == 200:

if len(user\_media['data']):

c = True

while c:

answer = input( 'Do you want to get the latest post? Reply: Y/N' )

if answer.upper() == 'Y':

x = 1

c = False

elif answer.upper() == 'N':

print ('Choose from the following\n')

print ("2. Second last post\n3. Third last post..\nand so on..")

x = input()

if x.isdigit():

if x < len(user\_media['data']):

x = int(x)

c = False

else:

print ('This post does not Exist!!')

else:

print ('You did not choose appropriate option. Try again!')

else:

print ('Press only y or n!!')

c = True

return user\_media['data'][x-1]['id']

else:

print ('There is no recent post of the user!')

exit()

else:

print ('Status code other than 200 received!')

exit()

def like\_a\_post(insta\_username):

media\_id = get\_post\_id(insta\_username)

request\_url = (base\_url + 'media/%s/likes') % media\_id

payload = {"access\_token": access\_token}

post\_a\_like = requests.post(request\_url, payload).json()

if post\_a\_like['meta']['code'] == 200:

print ('Like was successful!', 'red')

else:

print ('Your like was unsuccessful. Try again!')

def post\_a\_comment(insta\_username):

media\_id = get\_post\_id(insta\_username)

while True:

comment\_text = input("Your comment: ")

if len(comment\_text)>0 and comment\_text.isspace() == False:

payload = {"access\_token": access\_token, "text": comment\_text}

request\_url = (base\_url + 'media/%s/comments') % media\_id

make\_comment = requests.post(request\_url, payload).json()

if make\_comment['meta']['code'] == 200:

print ('\nSuccessfully added a new comment!','blue')

else:

print ("Unable to add comment. Try again!")

break

else:

print ('Cannot post an empty comment! Try again!')

def delete\_negative\_comment():

media\_id = get\_own\_post()

request\_url = (base\_url + 'media/%s/comments/?access\_token=%s') % (media\_id, access\_token)

comment\_info = requests.get(request\_url).json()

if comment\_info['meta']['code'] == 200:

if len(comment\_info['data']):

for x in range(0, len(comment\_info['data'])):

comment\_id = comment\_info['data'][x]['id']

comment\_text = comment\_info['data'][x]['text']

pred = check(comment\_text)

if pred == '0':

print ((comment\_text)+": Negative Comment")

)

else:

print ((comment\_text)+": Positive Comment")

else:

print ("There are no comments on this post yet.")

else:

print ("Status code other than 200 received.")

def get\_like\_list(insta\_username):

media\_id = get\_post\_id(insta\_username)

request\_url=(base\_url+"media/%s/likes?access\_token=%s") %(media\_id,access\_token)

like\_list = requests.get(request\_url).json()

if like\_list['meta']['code'] == 200:

if len(like\_list['data']):

for x in range(len(like\_list['data'])):

print ('People who liked this post:')

print ('%d. %s' %(x+1, like\_list['data'][x]['username']))

else:

print ('No one liked this post yet! Be the first one to like.')

else:

print ('Status code other than 200 received.')

def get\_comment\_list(insta\_username):

media\_id = get\_post\_id(insta\_username)

request\_url = (base\_url+'media/%s/comments?access\_token=%s') %(media\_id,access\_token)

comment\_list = requests.get(request\_url).json()

if comment\_list['meta']['code'] == 200:

if len(comment\_list['data']):

for x in range(len(comment\_list['data'])):

print ("%s : %s" %(comment\_list['data'][x]['from']['username'], comment\_list['data'][x]['text']))

else:

print ('There are no comments on this post yet!')

else:

print ('Status code other than 200 received.')

def list\_own\_like():

request\_url = base\_url+ 'users/self/media/liked?access\_token=' + access\_token

own\_likes = requests.get(request\_url).json()

if own\_likes['meta']['code'] == 200:

print ('Posts liked by the user are:')

for x in range(len(own\_likes['data'])):

print ('\nFrom:','blue')+own\_likes['data'][x]['user']['full\_name']+('\nType:','blue')+own\_likes['data'][x]['type']

print ('Post Id:','blue')+own\_likes['data'][x]['id']

def start\_bot():

print ('\n')

print ('Hey! Welcome to instaBot!')

print ('It\'s way more smarter than you think it is!')

print ('Try it yourself!!')

while True:

print ('\n')

print ('Here are your menu options:\n')

print ("1.Get your own details\n")

print ("2.Get details of a user by username\n")

print ("3.Download your own recent post\n")

print ("4.Download the recent post of a user by username\n")

print ("5.Get a list of people who have liked the recent post of a user\n")

print ("6.Like the recent post of a user\n")

print ("7.Get a list of comments on the recent post of a user\n")

print ("8.Make a comment on the recent post of a user\n")

print ("9.Categorize comments from the recent post of a user\n")

print ("10.Get list of posts liked by the User.\n")

print ("11.Exit.\n")

choice = input("Enter you choice: ")

if choice == '1':

self\_info()

elif choice == '2':

while True:

insta\_username = input("Enter the username of the user: ")

if len(insta\_username)>0 and insta\_username.isspace() == False:

get\_user\_info(insta\_username)

break

else:

print ('Enter a valid name!!')

elif choice == '3':

get\_own\_post()

elif choice == '4':

while True:

insta\_username = input("Enter the username of the user: ")

if len(insta\_username)>0 and insta\_username.isspace() == False:

get\_user\_post(insta\_username)

break

else:

print ('Enter a valid name!!')

elif choice == '5':

while True:

insta\_username = input("Enter the username of the user: ")

if len(insta\_username) > 0 and insta\_username.isspace() == False:

get\_like\_list(insta\_username)

break

else:

print ('Enter a valid name!!')

elif choice == '6':

while True:

insta\_username = input("Enter the username of the user: ")

if len(insta\_username) > 0 and insta\_username.isspace() == False:

like\_a\_post(insta\_username)

break

else:

print ('Enter a valid name!!')

elif choice == '7':

while True:

insta\_username = input("Enter the username of the user: ")

if len(insta\_username) > 0 and insta\_username.isspace() == False:

get\_comment\_list(insta\_username)

break

else:

print ('Enter a valid name!!')

elif choice == '8':

while True:

insta\_username = input("Enter the username of the user: ")

if len(insta\_username) > 0 and insta\_username.isspace() == False:

post\_a\_comment(insta\_username)

break

else:

print ('Enter a valid name!!')

elif choice == '9':

while True:

delete\_negative\_comment()

break

elif choice == '10':

list\_own\_like()

elif choice == '11':

exit()

else:

print ("Please choose the correct option!!")

start\_bot()