**ML code**

**Multinomial naive bayes-**

from flask import Flask, render\_template, request

import re

import nltk

import matplotlib.pyplot as plt

from nltk.corpus import stopwords

from nltk import pos\_tag

from nltk.stem import PorterStemmer

from nltk.stem.lancaster import LancasterStemmer

from nltk.corpus import sentiwordnet as swn

posiIntList = []

posireco = []

posiwish = []

# 4 classes of training data

training\_data = []

training\_data.append({"class":"purchase", "sentence":"Buy an iphone coz its great compact fon . Ultimate size...and nice camera..s7 z also good but not great"})

training\_data.append({"class":"purchase", "sentence":"going to buy this phone, it is a good choice for 2018"})

training\_data.append({"class":"purchase", "sentence":"I need to get a new phone. My current one is dying slowly (iPhone 6 is my current phone) "})

training\_data.append({"class":"purchase", "sentence":"Im getting a new iphone next weekend. "})

training\_data.append({"class":"suggestion", "sentence":"if iphone could come with dual camera"})

training\_data.append({"class":"suggestion", "sentence":"I suggest you to increase the camera quality of iphone"})

training\_data.append({"class":"suggestion", "sentence":" I would suggest to increase quality of iphone"})

training\_data.append({"class":"suggestion", "sentence":"It would be nice if iphone comes with dual camera"})

training\_data.append({"class":"recommendation", "sentence":"Unless you wanna look like a character from mine craft I suggest you get an iPhone.."})

training\_data.append({"class":"recommendation", "sentence":"Yes, I realize that the iPhone 7 announcement is on September 7th. Yes I know that I will be purchasing it with my sister when its released."})

training\_data.append({"class":"recommendation", "sentence":"I recommend that all android users invest in an Apple iphone."})

training\_data.append({"class":"recommendation", "sentence":"I will recommend you to get this iphone"})

training\_data.append({"class":"wish", "sentence":"I desire to purchase a iphone"})

training\_data.append({"class":"wish", "sentence":"I am interested in buying phone"})

training\_data.append({"class":"wish", "sentence":"I'm not an iPhone person, but might need one for work."})

training\_data.append({"class":"wish", "sentence":"Wish i could have the iPhone X without actually having to spend money on it"})

print ("%s sentences of training data" % len(training\_data))

# capture unique stemmed words in the training corpus

corpus\_words = {}

class\_words = {}

# turn a list into a set (of unique items) and then a list again (this removes duplicates)

classes = list(set([a['class'] for a in training\_data]))

for c in classes:

# prepare a list of words within each class

class\_words[c] = []

# loop through each sentence in our training data

for data in training\_data:

# tokenize each sentence into words

for word in nltk.word\_tokenize(data['sentence']):

# ignore a some things

if word not in ["?", "'s"]:

# stem and lowercase each word

stemmed\_word = stemmer.stem(word.lower())

# have we not seen this word already?

if stemmed\_word not in corpus\_words:

corpus\_words[stemmed\_word] = 1

else:

corpus\_words[stemmed\_word] += 1

# add the word to our words in class list

class\_words[data['class']].extend([stemmed\_word])

# we now have each stemmed word and the number of occurances of the word in our training corpus (the word's commonality)

print ("Corpus words and counts: %s \n" % corpus\_words)

# also we have all words in each class

print ("Class words: %s" % class\_words)

# calculate a score for a given class taking into account word commonality

def calculate\_class\_score(sentence, class\_name, show\_details=True):

score = 0

# tokenize each word in our new sentence

for word in nltk.word\_tokenize(sentence):

# check to see if the stem of the word is in any of our classes

if stemmer.stem(word.lower()) in class\_words[class\_name]:

# treat each word with relative weight

score += (1 / corpus\_words[stemmer.stem(word.lower())])

#if show\_details:

#print (" match: %s (%s)" % (stemmer.stem(word.lower()), 1 / corpus\_words[stemmer.stem(word.lower())]))

return score

# return the class with highest score for sentence

def classify(sentence):

high\_class = None

high\_score = 0

# loop through our classes

for c in class\_words.keys():

# calculate score of sentence for each class

score = calculate\_class\_score\_commonality(sentence, c, show\_details=False)

# keep track of highest score

if score > high\_score:

high\_class = c

high\_score = score

return high\_class, high\_score

# we can now calculate a score for a new sentence

with open("G:\\Data\\ki.txt", "r") as f:

tweetsText = f.read()

tweetsTokens = tweetsText.split("\n") # This splits the text file into tokens on the new line character

tweetsTokens[-1:] = [] # This strips out the final empty item

sugg=0

purch=0

reco=0

wish=0

total=0

for tweet in tweetsTokens:

high\_class = None

high\_score = 0

total=total+1

#sentence = "shall i purchase new iphone x "

# now we can find the class with the highest score

for c in class\_words.keys():

score=calculate\_class\_score(tweet, c)

print ("Class: %s Score: %s \n" % (c, calculate\_class\_score(tweet, c)))

if score > high\_score:

high\_class = c

high\_score = score

#print("Class:"+"-->"+high\_class+" "+"score:"+"-->"+str(high\_score))

if(high\_class =='suggestion'):

sugg=sugg+1

posiIntList.append(tweet)

elif(high\_class =='recommendation'):

reco=reco+1

posiIntList.append(tweet)

elif(high\_class =='wish'):

wish=wish+1

posiwish.append(tweet)

elif(high\_class =='purchase'):

purch=purch+1

else:

print("none")

camerasum=0

batsum=0

dissum=0

dessum=0

persum=0

cossum=0

def process(sentence):

#print(sentence)

global camerasum

global batsum

global dissum

global dessum

global persum

global cossum

for (w1,t1), (w2,t2) in nltk.bigrams(sentence):

#print(t1+"...........")

#print(w1)

if (t1.startswith('NN') and w1=='camera'):

camerasum+=1

if (t1.startswith('NN') and w1=='battery'):

batsum+=1

if (t1.startswith('NN') and w1=='display'):

dissum+=1

if (t1.startswith('NN') and w1=='design'):

dessum+=1

if (t1.startswith('NN') and w1=='performance'):

persum+=1

if (t1.startswith('NN') and w1=='cost'):

cossum+=1

for tweet in posiIntList:

x=[]

tokens = nltk.word\_tokenize(tweet)

try:

for i in tokens:

if not i in stop\_words:

x.append(i)

tagged=nltk.pos\_tag(x)

#print(tagged)

process(tagged)

except Exception as e:

print(str(e))

labels = 'Camera', 'Battery','Display','Design','Performanace','Cost'

sizes = [camerasum, batsum,dissum,dessum,persum,cossum]

colors = ['gold','lightcoral','yellow','blue','red','orange']

explode = (0.1, 0,0,0,0,0) # explode 1st slice

# Plot

plt.pie(sizes, explode=explode, labels=labels, colors=colors,

autopct='%1.1f%%', shadow=True, startangle=140)

plt.axis('equal')

plt.show()

#.............................................................................................................................

app = Flask(\_\_name\_\_)

@app.route('/')

def student():

return render\_template('index.html')

@app.route('/result',methods = ['POST', 'GET'])

def result():

if request.method == 'POST':

result = request.form

return render\_template("result.html",result = total,result1=fullt-total)

@app.route('/result1',methods = ['POST', 'GET'])

def result1():

if request.method == 'POST':

result = request.form

return render\_template("result1.html",result = totalp,result1=fulltp-totalp)

@app.route('/result2',methods = ['POST', 'GET'])

def result2():

if request.method == 'POST':

result = request.form

return render\_template("result2.html",sugg=sugg,purch=purch,wish=wish,recomm=reco,camera=camerasum,battery=batsum,display=dissum,design=dessum,performance=persum,cost=cossum)

if \_\_name\_\_ == '\_\_main\_\_':

app.run()

**Code for UI-**

<!DOCTYPE html>

<html lang="zxx" class="no-js">

<head>

<!-- Mobile Specific Meta -->

<meta name="viewport" content="width=device-width, initial-scale=1, shrink-to-fit=no">

<!-- Favicon-->

<link rel="shortcut icon" href="img/fav.png">

<!-- Author Meta -->

<meta name="author" content="CodePixar">

<!-- Meta Description -->

<meta name="description" content="">

<!-- Meta Keyword -->

<meta name="keywords" content="">

<!-- meta character set -->

<meta charset="UTF-8">

<!-- Site Title -->

<title>Envision Industry</title>

<style>

#navbar{

overflow:hidden;

}

</style>

<link href="https://fonts.googleapis.com/css?family=Poppins:300,500,600" rel="stylesheet">

<!--

CSS

============================================= -->

<link rel="stylesheet" href="css/linearicons.css">

<link rel="stylesheet" href="css/owl.carousel.css">

<link rel="stylesheet" href="css/font-awesome.min.css">

<link rel="stylesheet" href="css/nice-select.css">

<link rel="stylesheet" href="css/magnific-popup.css">

<link rel="stylesheet" href="css/bootstrap.css">

<link rel="stylesheet" href="css/main.css">

</head>

<body>

<div class="hero-area relative">

<header>

<div class="container" id="navbar">

<div class="header-wrap">

<div class="header-top d-flex justify-content-between align-items-center">

<div class="logo">

<h1><i> <font color="white"> Envision Industry </font></i></h1>

</div>

<div class="main-menubar d-flex align-items-center">

<nav class="hide">

<a href="index.html">Home</a>

<a href="About.html">About</a>

<a href="#contactd">Contact Us</a>

<a href="#contacte">Services</a>

</nav>

<div class="menu-bar"><span class="lnr lnr-menu"></span></div>

</div>

</div>

</div>

</div>

</header>

<div class="banner-area">

<div class="container">

<div class="row height align-items-center">

<div class="col-lg-7">

<div class="banner-content">

<h1 class="text-white text-uppercase mb-10">Don’t look anywhere, <br> This is the best place on web for Business Intelligence</h1>

<p class="text-white mb-30">With the advent of social media, people augment the socialo media search with feedbacks from specialized sites. Users make various opinions.. Envision industry focuses on identifying business intents that aid decision making and provide marketing solutions.</p>

</div>

</div>

</div>

</div>

</div>

</div>

<!-- Start Feature Area -->

<section class="featured-area">

<div id="contacte" class="container">

<div class="row justify-content-center">

<div class="col-lg-6">

<div class="section-title text-center">

<h2 class="text-white">Our Exclusive Services</h2>

<p class="text-white">Envision Industry is product to guide the decision-making process for Business Intelligence. </p>

</div>

</div>

</div>

<div class="row">

<div class="col-md-4">

<div class="single-feature">

<div class="thumb" style="background: url(img/t1.jpg);"></div>

<div class="desc text-center mt-30">

<h4 class="text-white">ANALYSIS OF CUSTOMER SENTIMENTS</h4>

<p class="text-white">The Path to Success</p>

<form action = "http://localhost:5000/result1" method = "POST">

<input class="primary-btn" type = "submit" value = "view" />

</form>

</div>

</div>

</div>

<div class="col-md-4">

<div class="single-feature">

<div class="thumb" style="background: url(img/t2.jpg);"></div>

<div class="desc text-center mt-30">

<h4 class="text-white">MARKETING STRATEGY ADVISING</h4><br>

<p class="text-white">Expert Guidance </p>

<form action = "http://localhost:5000/result" method = "POST">

<input class="primary-btn" type = "submit" value = "view" />

</form>

</div>

</div>

</div>

<div class="col-md-4">

<div class="single-feature">

<div class="thumb" style="background: url(img/t3.jpg);"></div>

<div class="desc text-center mt-30">

<h4 class="text-white">CUSTOMER'S INTENT ANALYSIS</h4>

<br>

<p class="text-white">A Comprehensive Approach</p>

<form action = "http://localhost:5000/result2" method = "POST">

<input class="primary-btn" type = "submit" value = "view" />

</form>

</div>

</div>

</div>

</div>

</div>

</section>

<!-- End Feature Area -->

<!-- Start Remarkable Wroks Area -->

<!--<section class="remarkable-area">

<div class="container">

<div class="row justify-content-center">

<div class="col-lg-6">

<div class="section-title text-center">

<h2>Remarkable Works</h2>

<p>LCD screens are uniquely modern in style, and the liquid crystals that make them work have allowed humanity to create slimmer, more </p>

</div>

</div>

</div>

<div class="single-remark">

<div class="row no-gutters">

<div class="col-lg-7 col-md-6">

<div class="remark-thumb" style="background: url(img/r1.jpg);"></div>

</div>

<div class="col-lg-5 col-md-6">

<div class="remark-desc">

<h4>Vector Illustration</h4>

<p>LCD screens are uniquely modern in style, and the liquid crystals that make them work have allowed humanity to create slimmer, more portable technology.</p>

<a href="#" class="primary-btn"><span>View Project</span></a>

</div>

</div>

</div>

</div>

<div class="single-remark">

<div class="row no-gutters">

<div class="col-lg-7 col-md-6">

<div class="remark-desc">

<h4>Vector Illustration</h4>

<p>While most people enjoy casino gambling, sports betting, lottery and bingo playing for the fun and excitement it provides, others may experience gambling as an addictive and distractive habit. Statistics show that while 85 percent of the adult population in </p>

<a href="#" class="primary-btn"><span>View Project</span></a>

</div>

</div>

<div class="col-lg-5 col-md-6">

<div class="remark-thumb" style="background: url(img/r2.jpg);"></div>

</div>

</div>

</div>

<div class="single-remark">

<div class="row no-gutters">

<div class="col-lg-7 col-md-6">

<div class="remark-thumb" style="background: url(img/r3.jpg);"></div>

</div>

<div class="col-lg-5 col-md-6">

<div class="remark-desc">

<h4>Vector Illustration</h4>

<p>LCD screens are uniquely modern in style, and the liquid crystals that make them work have allowed humanity to create slimmer, more portable technology.</p>

<a href="#" class="primary-btn"><span>View Project</span></a>

</div>

</div>

</div>

</div>

</div>

</section>-->

<!-- End Remarkable Wroks Area -->

<!--

<section class="story-area">

<div class="container">

<div class="row align-items-center">

<div class="col-lg-1">

</div>

<div class="col-lg-7">

<div class="story-box">

<h6 class="text-uppercase">From the part of beginning</h6>

<p>Usage of the Internet is becoming more common due to rapid advancement of technology and the power of globalization. Societies are becoming more inter-connected. Thoughts from different</p>

<a href="#" class="primary-btn d-inline-flex align-items-center"><span class="mr-10">Get Started</span><span class="lnr lnr-arrow-right"></span></a>

</div>

</div>

</div>

</div>

</section>

-->

<!-- Start Subscription Area -->

<section class="subscription-area">

<div id="contactd"class="container">

<div class="row align-items-center">

<div class="col-lg-6">

<div class="section-title">

<h3>Subscribe Us</h3>

<span>Can you imagine what we will be downloading in another</span>

</div>

</div>

<div class="col-lg-6">

<div id="mc\_embed\_signup">

<form target="\_blank" novalidate action="https://spondonit.us12.list-manage.com/subscribe/post?u=1462626880ade1ac87bd9c93a&id=92a4423d01" method="get" class="subscription relative">

<input type="email" name="EMAIL" placeholder="Your email address" onfocus="this.placeholder = ''" onblur="this.placeholder = 'Your email address'" required>

<div style="position: absolute; left: -5000px;">

<input type="text" name="b\_36c4fd991d266f23781ded980\_aefe40901a" tabindex="-1" value="">

</div>

<button class="primary-btn hover d-inline-flex align-items-center"><span class="mr-10">Get Started</span><span class="lnr lnr-arrow-right"></span></button>

<div class="info"></div>

</form>

</div>

</div>

</div>

</div>

</section>

<!-- End Subscription Area -->

<!-- Start Contact Form -->

<section class="contact-form-area">

<div class="container">

<div class="row justify-content-center">

<div class="col-lg-6">

<div class="section-title text-center">

<h2 class="text-white">Keep in Touch</h2>

<p class="text-white">We have Business Intelligence solutions with us, Kindly stay connected with to improve Business and Buying experience. </p>

</div>

</div>

</div>

<form id="myForm" action="mail.php" method="post" class="contact-form">

<div class="row justify-content-center">

<div class="col-lg-5">

<input type="text" name="fname" placeholder="Enter your name" onfocus="this.placeholder = ''" onblur="this.placeholder = 'Enter your name'" class="common-input mt-20" required>

</div>

<div class="col-lg-5">

<input type="email" name="email" placeholder="Enter email address" pattern="[A-Za-z0-9.\_%+-]+@[A-Za-z0-9.-]+\.[A-Za-z]{1,63}$" onfocus="this.placeholder = ''" onblur="this.placeholder = 'Enter email address'" class="common-input mt-20" required>

</div>

<div class="col-lg-10">

<textarea class="common-textarea mt-20" name="message" placeholder="Messege" onfocus="this.placeholder = ''" onblur="this.placeholder = 'Messege'" required></textarea>

</div>

<div class="col-lg-10 d-flex justify-content-end">

<button class="primary-btn submit-btn d-inline-flex align-items-center mt-20"><span class="mr-10">Send Message</span><span class="lnr lnr-arrow-right"></span></button> <br>

<div class="alert-msg"></div>

</div>

</div>

</form>

</div>

</section>

<!-- End Contact Form -->

<!-- Start Footer Widget Area -->

<section class="footer-widget-area">

<div class="container">

<div class="row">

<div class="col-md-4">

<div class="single-widget">

<div class="desc">

<h6 class="title">Address</h6>

<p>VESIT <br> Chembur, Mumbai</p>

</div>

</div>

</div>

<div class="col-md-4">

<div class="single-widget">

<div class="desc">

<h6 class="title">Email Address</h6>

<div class="contact">

<a href="mailto:info@dataarc.com">Lalit.Pathak@ves.ac.in</a> <br>

<a href="mailto:support@dataarc.com">EnvisionIndustry@gmail.com</a>

</div>

</div>

</div>

</div>

<div class="col-md-4">

<div class="single-widget">

<div class="desc">

<h6 class="title">Phone Number</h6>

<div class="contact">

<a href="tel:1545">+91 9730714925</a> <br>

<a href="tel:54512">+91 8648541351</a>

</div>

</div>

</div>

</div>

</div>

</div>

<footer>

<div class="container">

<div class="footer-content d-flex justify-content-between align-items-center flex-wrap">

<div class="copy-right-text">Copyright &copy; 2018 | All rights reserved to Envision Industry </div>

<div class="footer-social">

<a href="#"><i class="fa fa-facebook"></i></a>

<a href="#"><i class="fa fa-twitter"></i></a>

<a href="#"><i class="fa fa-dribbble"></i></a>

<a href="#"><i class="fa fa-behance"></i></a>

</div>

</div>

</div>

</footer>

</section>

<!-- End Footer Widget Area -->

<script src="js/vendor/jquery-2.2.4.min.js"></script>

<script src="https://cdnjs.cloudflare.com/ajax/libs/popper.js/1.11.0/umd/popper.min.js" integrity="sha384-b/U6ypiBEHpOf/4+1nzFpr53nxSS+GLCkfwBdFNTxtclqqenISfwAzpKaMNFNmj4" crossorigin="anonymous"></script>

<script src="js/vendor/bootstrap.min.js"></script>

<script src="js/jquery.ajaxchimp.min.js"></script>

<script src="js/owl.carousel.min.js"></script>

<script src="js/jquery.nice-select.min.js"></script>

<script src="js/jquery.magnific-popup.min.js"></script>

<script src="js/main.js"></script>

</body>

</html>