A Project Report on

SENTIMENT ANALYZER

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Certificate

This is to certify that the project entitled **Sentiment Analyzer** is being submitted to the Department of Information Technology, Ramrao Adik Institute of Technology,Navi Mumbai.

Project Guide External Examiner(Ms.Anita Senathi) ( )

Acknowledgement

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Introduction

Having a lot of likes and comments under your social media posts might seem like a success. After all, people are interacting with your content, so the social media plan worked!

But do you know what travels fast on the Internet? Bad news!

A high volume of mentions is only a positive sign when it's accompanied by positive sentiment.

Examining the sentiment around your brand will help you in many different areas of your marketing presence.

Of course, a detailed social media analysis contains not only hard numbers and sentiment analysis, but also estimated social media reach of your most active audience. The more data you could analyse, the more accurate and actionable your analysis will be.

Sentiment analysis is relatively new metric in marketing analysis, but it's already proven to be one of the most important context metrics there is!

So, without further ado, here we use of sentiment analyzer for a analysis.

Proposed System

Sentiment analysis or opinion mining is an important type of text analysis that aims to support decision making by extracting and analyzing opinion oriented text, identifying positive and negative opinions, and measuring how positively or negatively an entity (i.e., people, organization, event, location, product, topic, etc.) is regarded. As more and more users express their political and religious views on Twitter, tweets become valuable sources of people's opinions. Tweets data can be efficiently used to infer people's opinions for marketing or social studies. This paper proposes a Tweets Sentiment Analysis Model (TSAM) that can spot the societal interest and general people's opinions in regard to a social event.

System Components

1. **Frontend**: HTML5,CSS

2.Backend :Pycharm IDE,Django framework

3.Database: Dbsqlite3

1.1 HTML:

HTML is HyperText Mark-up Language used to documents (called pages) that are displayed on the World Wide Web. Each page contains a series of connections to other pages called hyperlinks. Every web page you see on the Internet is written using one version of HTML code or another.HTML code ensures the proper formatting of text and images so that your Internet browser may display them as they are intended to look. Without HTML, a browser would not know how to display text as elements or load images or other elements. HTML also provides a basic structure of the page, upon which Cascading Style Sheets are overlaid to change its appearance. User interface is designed using HTML CSS and Bootstrap.

1.2 CSS:

Cascading Style Sheets, fondly referred to as CSS, is a simple design language intended to simplify the process of making web pages presentable.CSS handles the look and feel part of a web page. Using CSS, you can control the color of the text, the style of fonts, the spacing between paragraphs, how columns are sized and laid out, what background images or colors are used, layout designs, variations in display for different devices and screen sizes as well as a variety of other effects.

2.1Django(2.0.3):

Django is a free and open-source web framework, written in Python, which follows the model-view-template architectural pattern.In our project we have used this framework to host our leave management system in which users will login to apply for leave that will be approved or not approved by admin.

Django is a widely-used Python web application framework with a "batteries-included" philosophy. The principle behind batteries-included is that the common functionality for building web applications should come with the framework instead of as separate libraries. Authentication, URL routing, a template engine, an object-relational mapper (ORM), and database schema migrations are all included with the Django framework. Compare that included functionality to the Flask framework which requires a separate library such as Flask-Login to perform user authentication.

Companies, organizations and governments have used Django to build all sorts of things — from content management systems to social networks to scientific computing platforms.

2.3 Python:

Python is an interpreted, object-oriented, high-level programming language with dynamic semantics. Its high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a

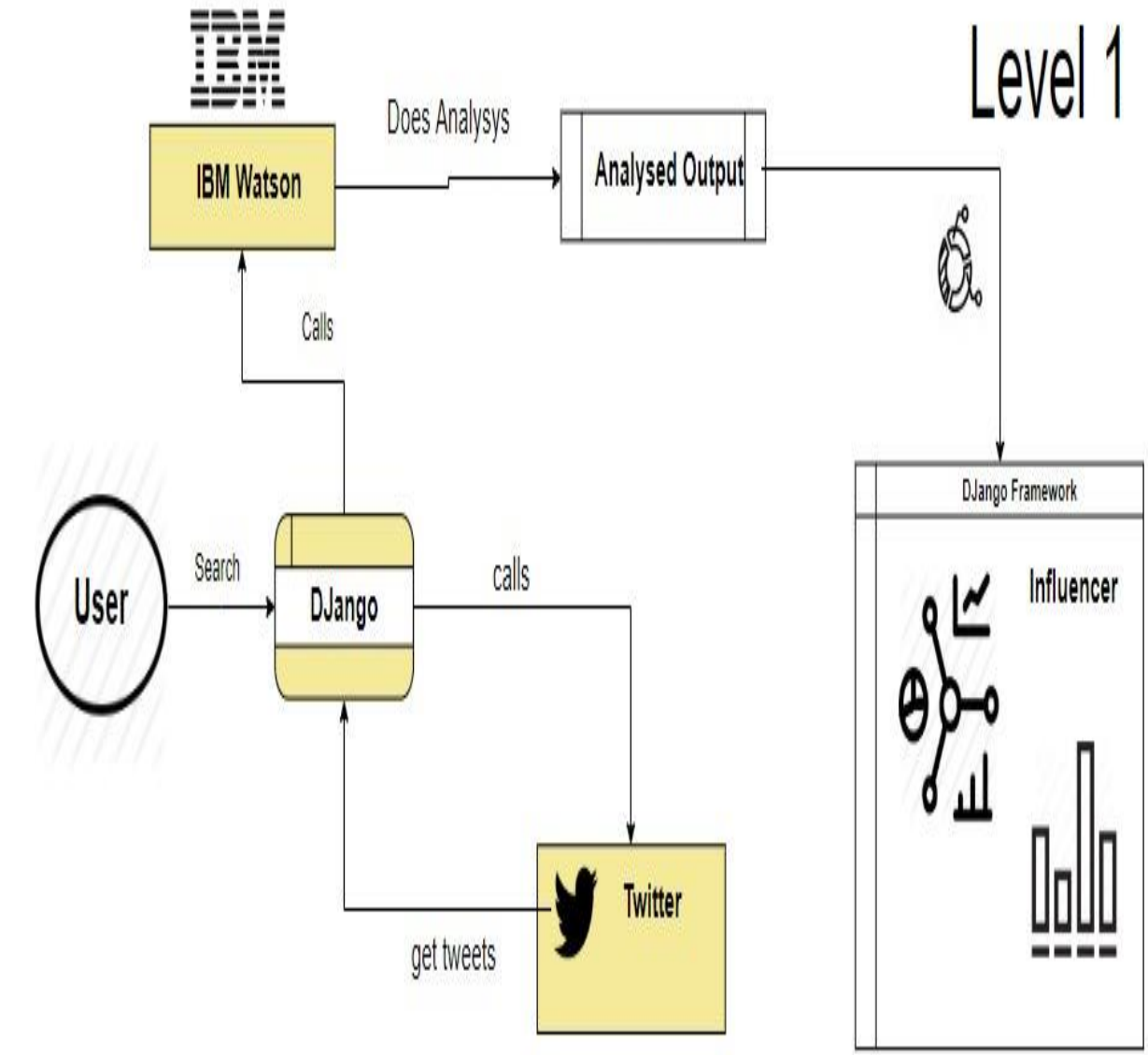
scripting or glue language to connect existing components together. Python's simple, easy to learn syntax emphasizes readability and therefore reduces the cost of program maintenance. Python supports modules and packages, which encourages program modularity and code reuse. The Python interpreter and the extensive standard library are available in source or binary form without charge for all major platforms, and can be freely distributed. The fast edit-test-debug cycle makes this simple approach very effective.

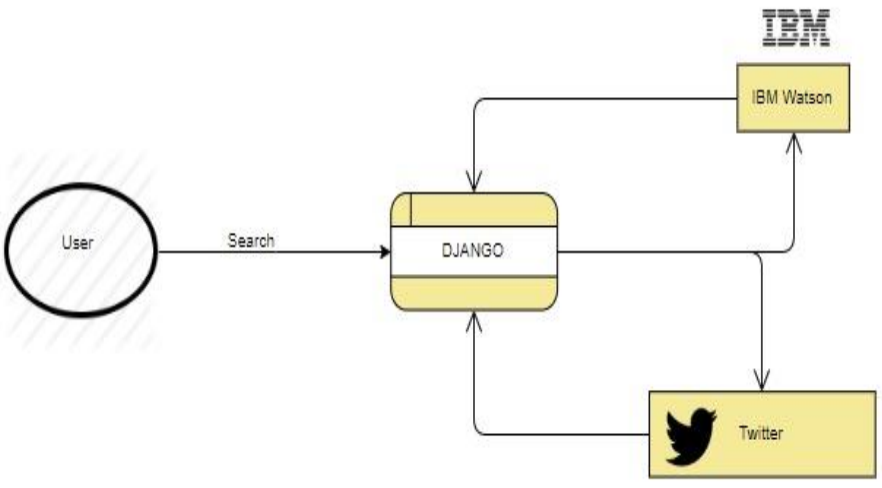
3.1 Dbsqlite3:

SQLite is an in-process library that implements a self-contained, server less, zero-configuration, transactional SQL database engine. SQLite is the most widely deployed database in the world with more applications than we can count, including several high-profile projects. Dbsqlite3 is a built-in database provided Django framework.

SQLite is an embedded SQL database engine. Unlike most other SQL databases, SQLite does not have a separate server process. SQLite reads and writes directly to ordinary disk files. A complete SQL database with multiple tables, indices, triggers, and views, is contained in a single disk file.

Architecture





WORKING OF SYSTEM

When a user enters the hashtag it's first passed to the twitter through the API call and twitter API provides tweets to our application. The tweets then are passed to IBM Watson in JSON format. The sentiment analysis is done on the provided tweets and the results are passed to the Django application

SENTIMENT ANALYZER

Advantages of Sentiment Analyzer

1.You can develop a more insightful, data-based marketing strategy.

2.Understand your customers

3.Measure your marketing campaign

4. Take a look at brand perception

5. Find industry leaders and influencers

6. Give extra boost to your customer service

Django Source Code

1.Manage.py

```
#!/usr/bin/env python
"""Django's command-line utility for administrative tasks."""
import os
import sys
def main():
    os.environ.setdefault('DJANGO_SETTINGS_MODULE', 'proj.settings')
    try:
        from django.core.management import execute_from_command_line
    except ImportError as exc:
        raise ImportError(
            "Couldn't import Django. Are you sure it's installed and "
            "available on your PYTHONPATH environment variable? Did you "
            "forget to activate a virtual environment?"
        ) from exc
    execute_from_command_line(sys.argv)
if __name__ == '__main__':
    main()
```

2. View.py

```
import
json
from ibm_watson import NaturalLanguageUnderstandingV1
from ibm_cloud_sdk_core.authenticators import IAMAuthenticator
from ibm_watson.natural_language_understanding_v1 import Features, EmotionOptions
from django.shortcuts import render
from django.http import HttpResponse
import tweepy
import re
def home(request):
    return  render(request, 'index.html')
def result(request):
    auth = tweepy.OAuthHandler('', '')
```

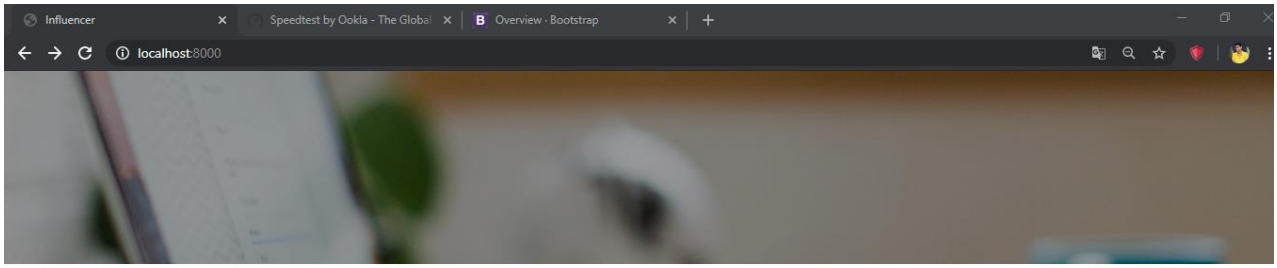
```
        auth.set_access_token('', '')
        api = tweepy.API(auth)
        query = request.GET['query']
        data = ''
        for tweet in tweepy.Cursor(api.search, q=query).items(1):
            data=data+tweet.text
            print(tweet.text)
        authenticator = IAMAuthenticator('')
        natural_language_understanding = NaturalLanguageUnderstandingV1(
        version='2019-07-12',
        authenticator=authenticator
        )
        natural_language_understanding.set_service_url('')
        data = re.sub(
        r'\w+:\/{2}[\d\w-]+(\.[\d\w-]+)*(?:(?:\/[^\s/]*))*', '', data)
        data = re.sub('[^A-Za-z0-9\s]+', '', data)
        data = re.sub('@', '', data)
        data = data.lower()
        print(data)
        response = natural_language_understanding.analyze(
        text=data,

    features=Features(emotion=EmotionOptions()),language='en').get_result()
        s=response['emotion']['document']['emotion']
        for i in s:
            s[i]="{:.2f}".format(abs(float(s[i])*100))
        return render(request,'result.html',s)
```

3. Urls.py

```
from django.urls import include, path
                                    from . import views
                                    from django.contrib import admin
                                    urlpatterns = [
                                        path('', views.home, name='home'),
                                        path('result/', views.result,
                                    name='result')
]
```

Snaps of Web Application



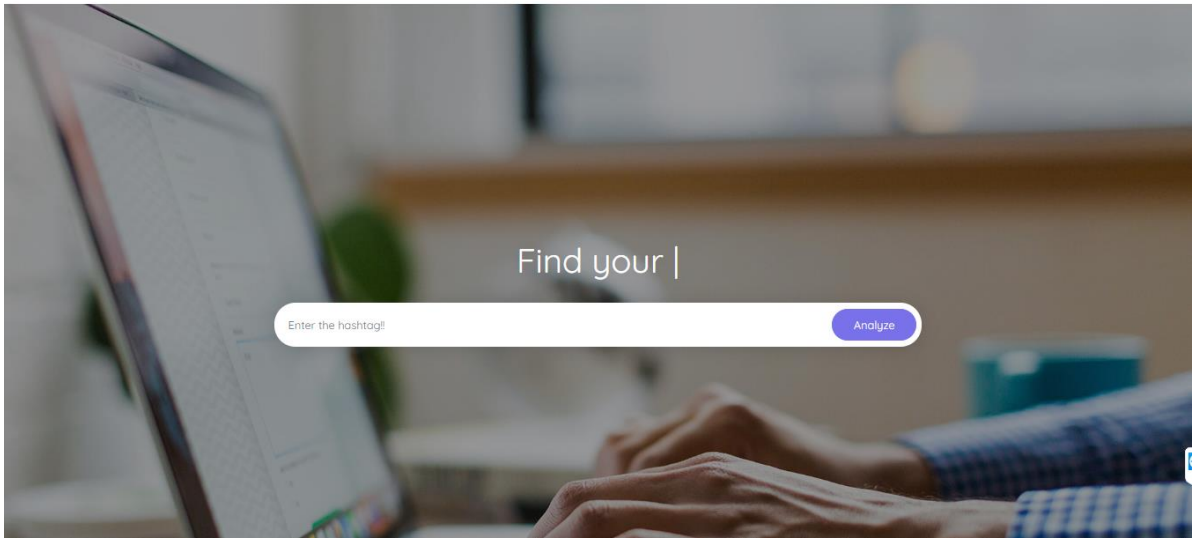
Why Us

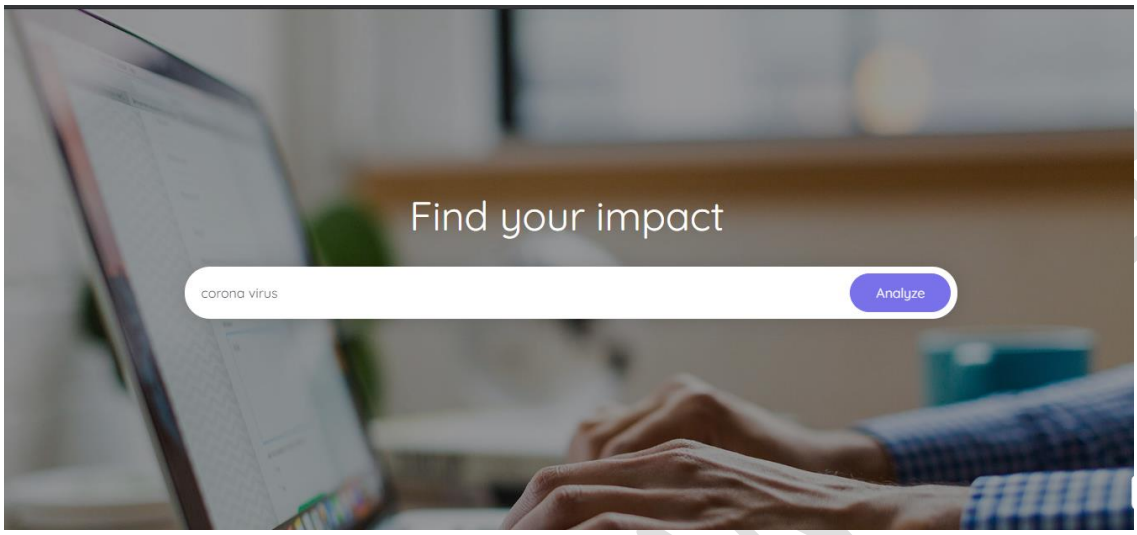
Our platform provides you the most of the responses of your brand on social Media.

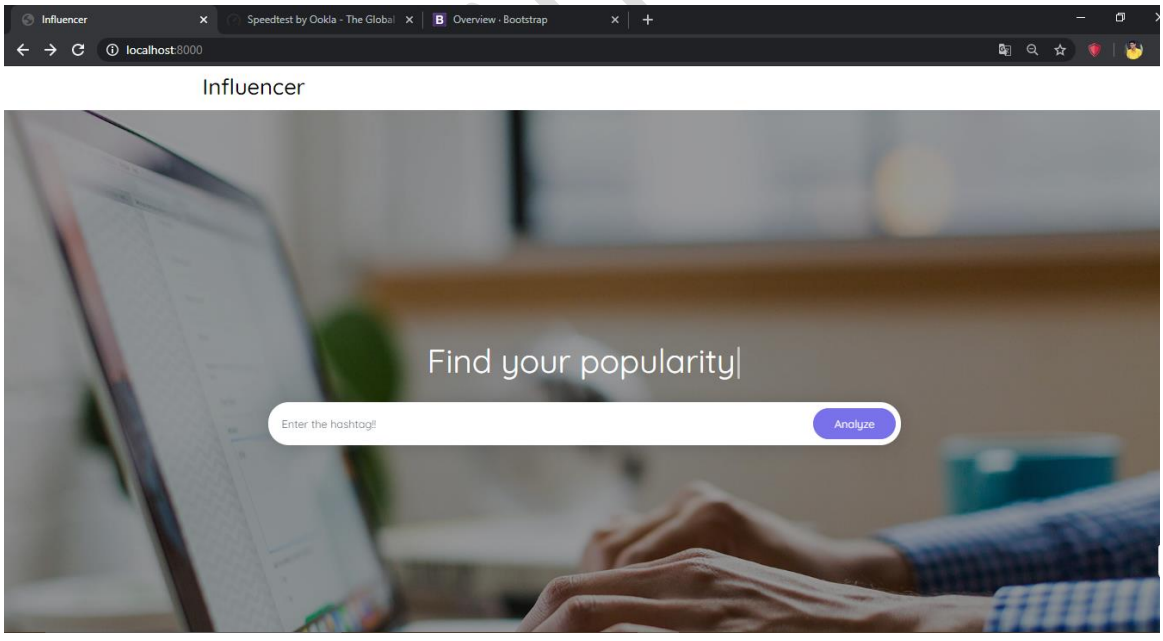
The accurate insight of data will advance your marketing strategy as it has impact on many different aspects of your brand's online presence.

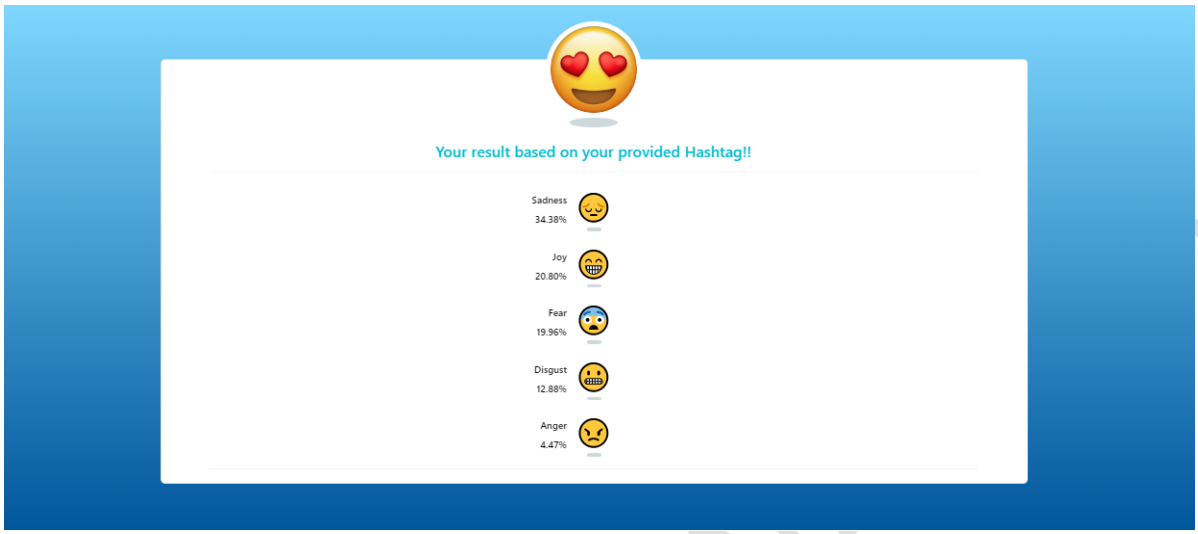
- Understand your customers
- Measure your marketing campaign impact.
- Take a look at brand perception

Influencer




Find your impact
corona virus
Analyze


Influencer
Speedtest by Ookla - The Global
Overview · Bootstrap
localhost:8000
Influencer
Find your popularity
Enter the hashtag!!
Analyze



Conclusion

Our Sentiment analyzer named “Influencer” is much useful for the social media influencers and the brands to know their audience or customers in a more accurate manner. The analysis provided by our system simplifies the decision making for brands for their upcoming campaigns.

References

- Django documentation
- The Definitive Guide to Django Web Development
- Sentdex Youtube
- Thenewboston Youtube