VISION DOCUMENT

“TWEETFEEL”

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1. INTRODUCTION

We are working on a live Twitter Sentiment Analysis Web app and mobile app based on a Machine Learning Model.
Twitter sentiment analysis analyzes the sentiment or emotion of tweets. It uses natural language processing and machine learning algorithms to classify tweets automatically as positive, negative, or neutral based on their content, basically it will analyze the product based on the customer sentiment. It can be done for individual tweets or a larger dataset related to a particular topic or event.

2. PROBLEM STATEMENT

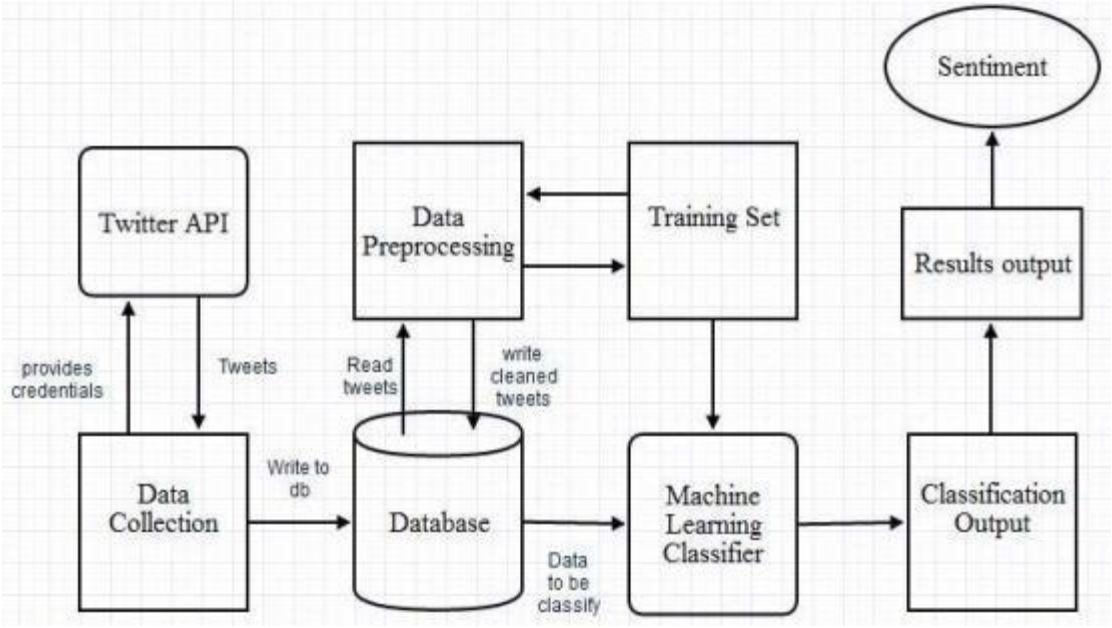
Analyzing the massive amounts of data generated on Twitter can be a challenge. Therefore, the objective of this project is to develop a machine learning model that can accurately classify tweets as positive, negative or neutral, and provide insights to help businesses make data-driven decisions based on customer sentiment.

3.PROPOSAL SOLUTION

The proposed website will have several key features, including a userfriendly interface, customizable sentiment analysis reports, and data visualization tools. These features will allow users to easily access and analyze Twitter data, and provide valuable insights into public opinion and sentiment.

However, the success of the website project will depend on several factors, including the accuracy and reliability of the sentiment analysis algorithms, the scalability of the system, and the ability to gather and analyze large volumes of Twitter data in real-time.

DIAGRAM



4.TECHNOLOGIES USED

1.Colab Notebook : Google Colaboratory, or "Colab" as most people call it, is a cloud-based Jupyter notebook environment. It runs in your web browser and lets you build a Machine Learning model and artificial intelligence model.
2.Python- Python is an interpreted, high level, and general-purpose programming language.
3.Flask web framework(works with python)- Flask is a web framework.Flask is a back-end micro-framework, and it makes data handling clean and simple.
4.Tweepy(Twitter API for Python)- Tweepy is an open-source Python package that gives you a very convenient way to access the Twitter API with Python.
5.HTML/CSS- HTML and CSS is the base for the website front-end design.

5.OBJECTIVES

1. Business and brands- Companies may use sentiment analysis to understand how their products or services are being perceived by the public. By analyzing the sentiment of tweets mentioning their brand,

they can gauge customer satisfaction, identify areas for improvement, and monitor their brand reputation.

2.Social Media Managers-Individuals or organizations responsible for managing social media accounts can utilize sentiment analysis to gain insights into how their content is being received. They can identify trending topics, evaluate engagement levels, and adjust their strategies accordingly.

3.Market Assumption-Researchers and analysts can leverage sentiment analysis to study public opinion on various topics. By analyzing the sentiment of tweets, they can identify emerging trends, evaluate the success of marketing campaigns, and gather valuable insights for decision-making

4. Crisis Management and Public Relations: During a crisis or an event with significant public interest, sentiment analysis can help assess the sentiment and public perception in real-time. This information enables organizations to respond promptly, address concerns, and manage their public image effectively.

6.ASSUMPTION

One assumption in Twitter sentiment analysis is that the text in tweets accurately reflects the sentiment of the user. However, this may not always be the case as users may use sarcasm, irony, or other forms of figurative language that can be difficult for a machine algorithm to interpret accurately. Additionally, sentiment analysis may also be influenced by other factors such as the context of the tweet, the demographics of the user, and the cultural background of the language used**.**

7.IN-SCOPE

Collecting data: You will need to use a Twitter API to collect tweets related to your target audience or topic. You may also want to use a web scraping tool to find additional data.

Data visualization: Data visualization involves creating visual representations of the data to make it easier to understand, such as graphs and charts.

8.OUT-SCOPE

Non-English tweets: If the project is only focused on analyzing English tweets, then tweets in other languages will be out of scope.

Images and videos: Sentiment analysis can only be done on text-based content, so any image or video-based tweets will be out of scope.

Historical tweets: The project may only focus on analyzing tweets that are currently being posted, and not analyze historical tweets.

Private accounts and direct messages: If the project is only analyzing public tweets, then private accounts and direct messages will be out of scope.

9.CONCLUSION

In conclusion, the website and app development project for Twitter sentiment analysis has the potential to provide a valuable service to users who wish to understand the sentiment around a particular topic or brand on Twitter. By leveraging machine learning and natural language processing techniques, the website can provide accurate and real-time analysis of Twitter data.

10.SEMESTER DEADLINES:

26th May – Frontend development
2nd June- Frontend completion
9th June – ML model beginning
24th June – Project Completion

11.FUTURE SCOPE

1. Enhanced Accuracy: Advancements in natural language processing (NLP) and machine learning techniques will contribute to improving the accuracy of sentiment analysis algorithms. Future models will likely be better equipped to understand the context, sarcasm, and nuances of human language, leading to more precise sentiment classification.
2. Multilingual Sentiment Analysis: As Twitter is a global platform with users from diverse linguistic backgrounds, the future of sentiment analysis will involve expanding its capabilities to analyze sentiment in multiple languages. This will enable organizations and researchers to gain insights from a broader range of Twitter users worldwide.
3. Real-Time Sentiment Monitoring: Real-time sentiment analysis will continue to be a crucial area of development. Monitoring and analyzing sentiments in real-time will allow businesses, brands, and organizations to respond promptly to customer feedback, emerging trends, or crisis situations, enhancing their ability to manage their online presence effectively.
4. Sentiment Visualization: Develop visualization techniques to present sentiment analysis results in an easily interpretable and visually appealing manner. Visualizing sentiment patterns can help in quickly identifying sentiment trends and patterns.
5. Fine-grained Sentiment Analysis: Extend the model to perform more nuanced sentiment analysis by categorizing sentiments into finer-grained classes like positive, negative, neutral, or even specific emotions like happiness, sadness, anger, etc. This can provide more detailed insights into sentiment patterns.