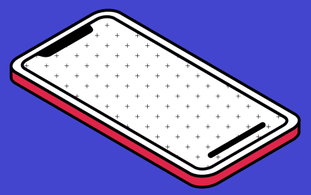
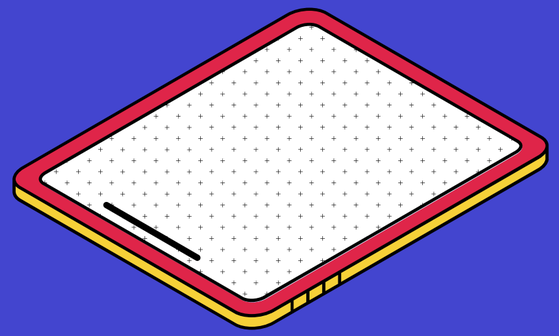
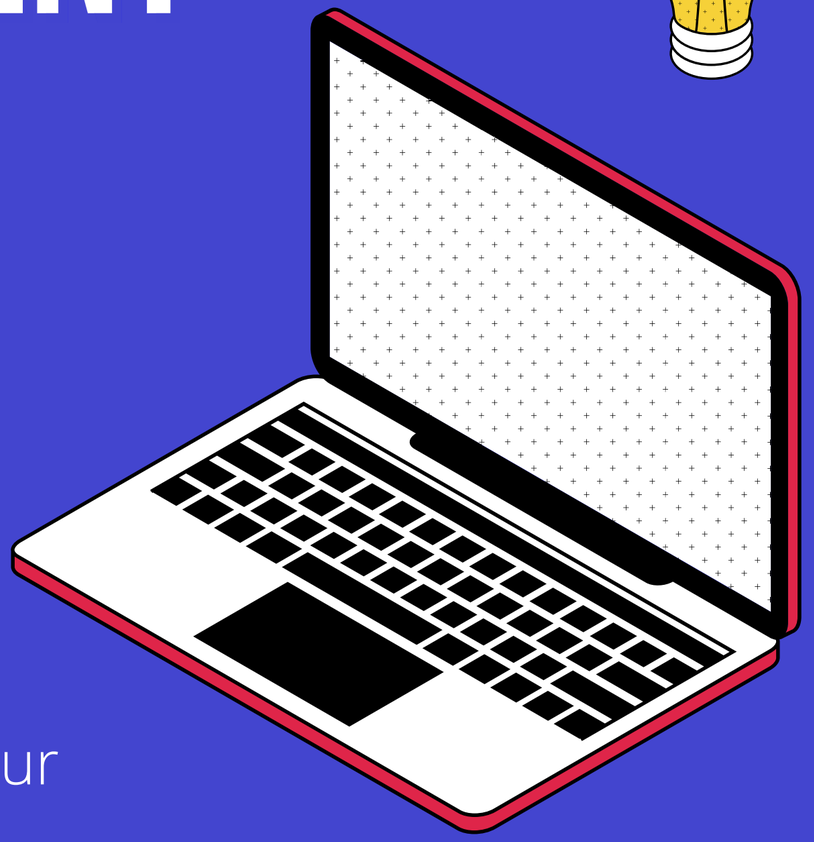
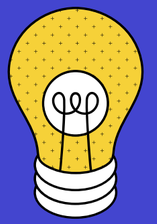
SENTIMENT ANALYSIS FOR PRODUCT DEVELOPMENT

Putting the "U" in a PRODUCT









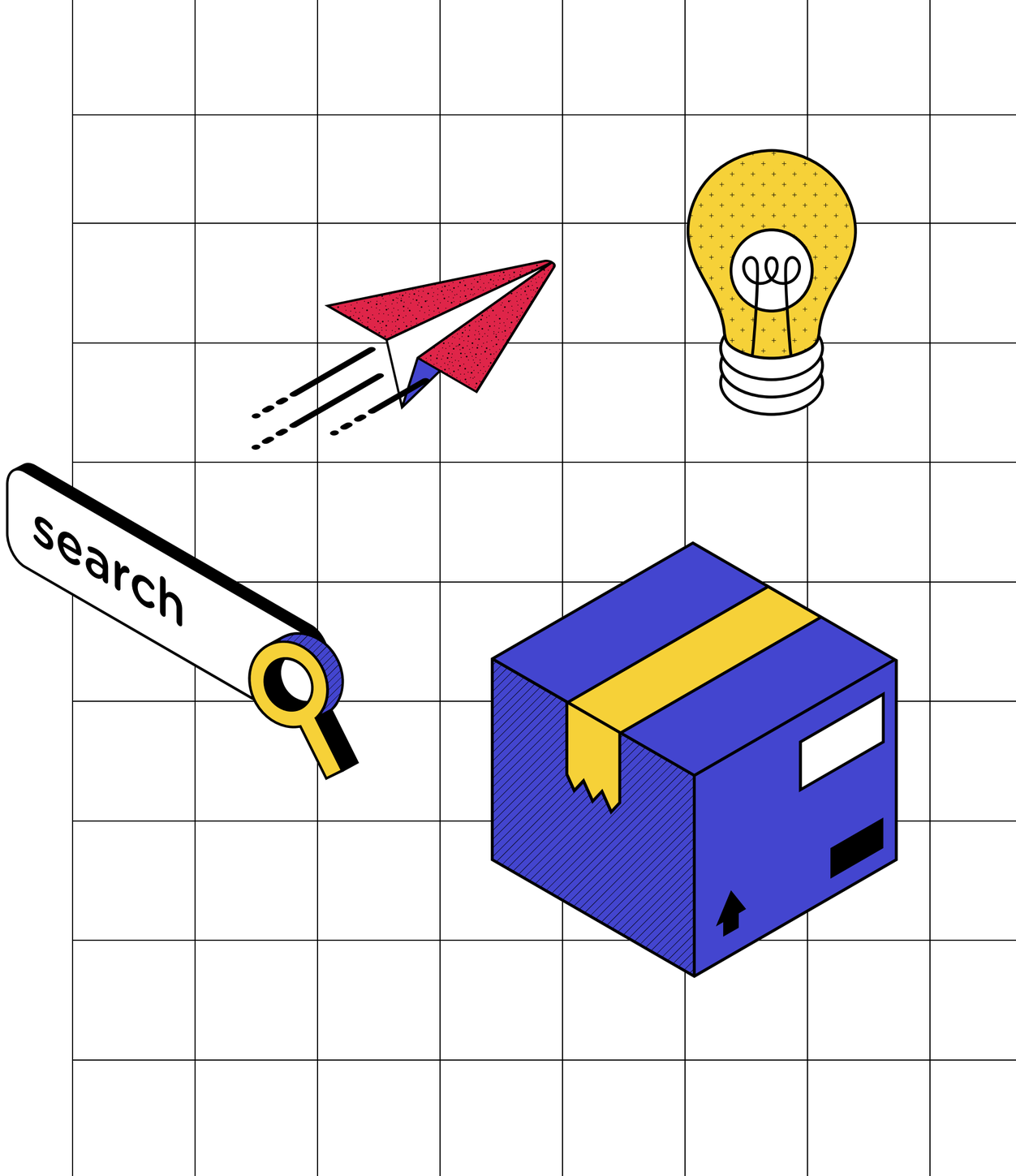
Yash Brid
2019130008

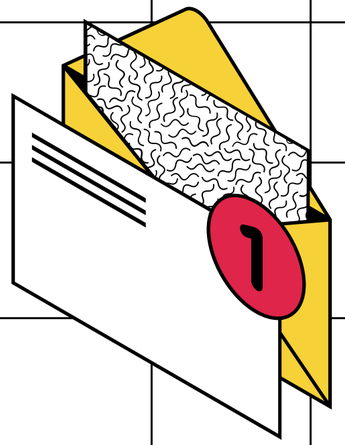
Abhishek Chopra
2019130009

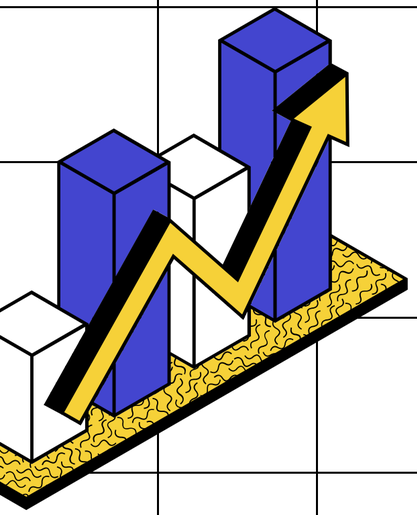
Sumeet Haldipur
2019130018

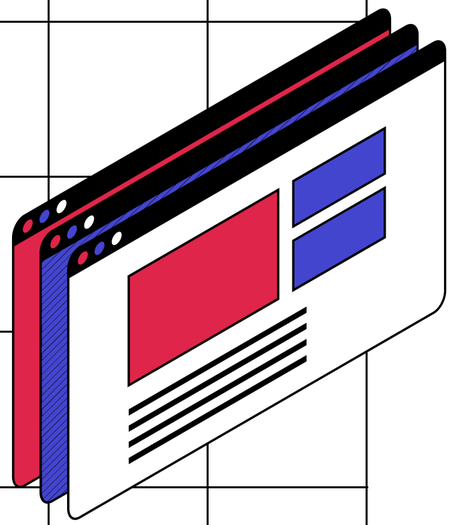
PROBLEM STATEMENT

We plan on creating a website that allows companies to go through reviews about their products by deriving that information through a website like twitter and later segregting and displaying them as positive, negative and neutral feedback regarding the product so that they can modify the product according to the consumer's needs. Along with this, we plan on plan on providing future analysis on the popularity of the product based on current opinions.









CURRENT SCENARIO

Social media is becoming an increasingly more important source of information for an enterprise. People are more willing and happy to share the facts about their lives, knowledge, experiences and thoughts with the entire world through social media more than ever before. They actively participate in events by expressing their opinions and stating their comments that take place in society. This way of sharing their knowledge and emotions with society and social media drives the businesses to collect more information about their companies, products and to know how reputed they are among the people and thereby take decisions to go on with their businesses effectively.


LITERATURE SURVEY


PAPER NAME	MAJOR WORK	DRAWBACKS
Sentiment Analysis on Twitter Data for product evaluation	To analyze the sentiments and opinions of people, on various products and services, posted on various microblogging websites using Machine Learning approach. This paper used the Naïve Bayes Algorithm to train a Movie Review Dataset, it also uses the TextBlob package in python to calculate the sentiments of the tweets.	The accuracy of the algoritm is satisfactory but can be improved by training it on a larger dataset and using better approaches and algorithm.
Sentiment Analysis Of Product Reviews – A Survey	This survey paper gives an impact on the ongoing educates in sentiment analysis calculations and applications. This article also offers commitments to numerous feeling examination related fields that utilize sentiment analysis systems for genuine application.	The approach isn't very accurate due to the inherent complexity of the natural language constructs as there are different ways of representing the same meaning.


LITERATURE SURVEY


PAPER NAME	MAJOR WORK	DRAWBACKS
Sentiment Analysis for Social Media	This paper reveals an approach which is implemented as a tool that can analyze sentiments on twitter social media addressing above issues and then develop an application to generate knowledge that can be useful for business environments using people's attitudes about their products and services.	Some people use different jargon, slang communications and short forms of the words for their ease. Therefore, it is difficult to gauge and measure the sentiments accurately in terms of their polarity such as positive, negative or neutral and the subjectivity of sentiments
Sentiment analysis of twitter data	This paper discusses social network analysis and the importance of it, implements a python program to conduct sentimental analysis and show results based on different queries including movie, politics, fashion, and fake news.	For some queries, the neutral tweets are more than 60% which clearly shows the limitation of the current works and highlights a need to improve twitter sentiment analysis.


LITERATURE SURVEY


PAPER NAME	MAJOR WORK	DRAWBACKS
A Study on Sentiment Analysis Techniques of Twitter Data	This paper explores the various sentiment analysis applied to Twitter data and their outcomes. It gives an idea about the Naive Bayes, Maximum Entropy and Support Vector Machine Algorithms. It also discusses the Supervised Machine Learning Approaches, Ensemble Approaches, Lexicon Based Approahes and Hybrid methods for sentiment analysis.	Combining various features was found to lead to improve the performance in most cases, but substandard performance in others. Active learning methods weren't utilised to detect Twitter sentiments.
Sentiment Analysis: It's Complicated!	This paper highlight the need to better engage with how humans actually annotate data in short-text sentiment analysis dataset construction by constructing the new McGill Twitter Sentiment Analysis (MTSA) dataset.	Raw human annotations weren't included which limits the extent to which the MTSA dataset can operate.

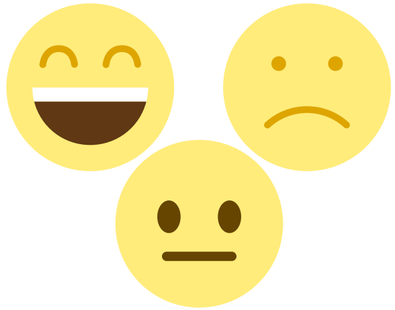
Proposed System

SEARCHING FOR THE PRODUCT

Allowing the companies to search for the required product whose reviews are to be extracted

EXTRACTION OF DATA

Extracting posts related to the product from social media sites like twitter



SEGREGATING DATA

Segregating the data acquired as positive, negative and neutral

PRODUCT PROFILING

Finally, using the sentiment scores, it could successfully profile the products, analyze trends and forecasting.

TIMELINE AND PROJECT PLAN

The 5 Phases

1st week of March

UNDERSTAND

To understand how the algorithms and various machine learning techniques required to perform sentiment analysis work.

2nd week of March

PLAN

Plan a roadmap to learn and use the most efficient and feasible machine learning technique, while collecting datasets simultaneously to be used for the same.

3rd week of March to 3rd week of April

BUILD

Build an app/website to process data from various websites and understand the sentiments/opinions of people about a certain product/service.

3rd week of May

TEST

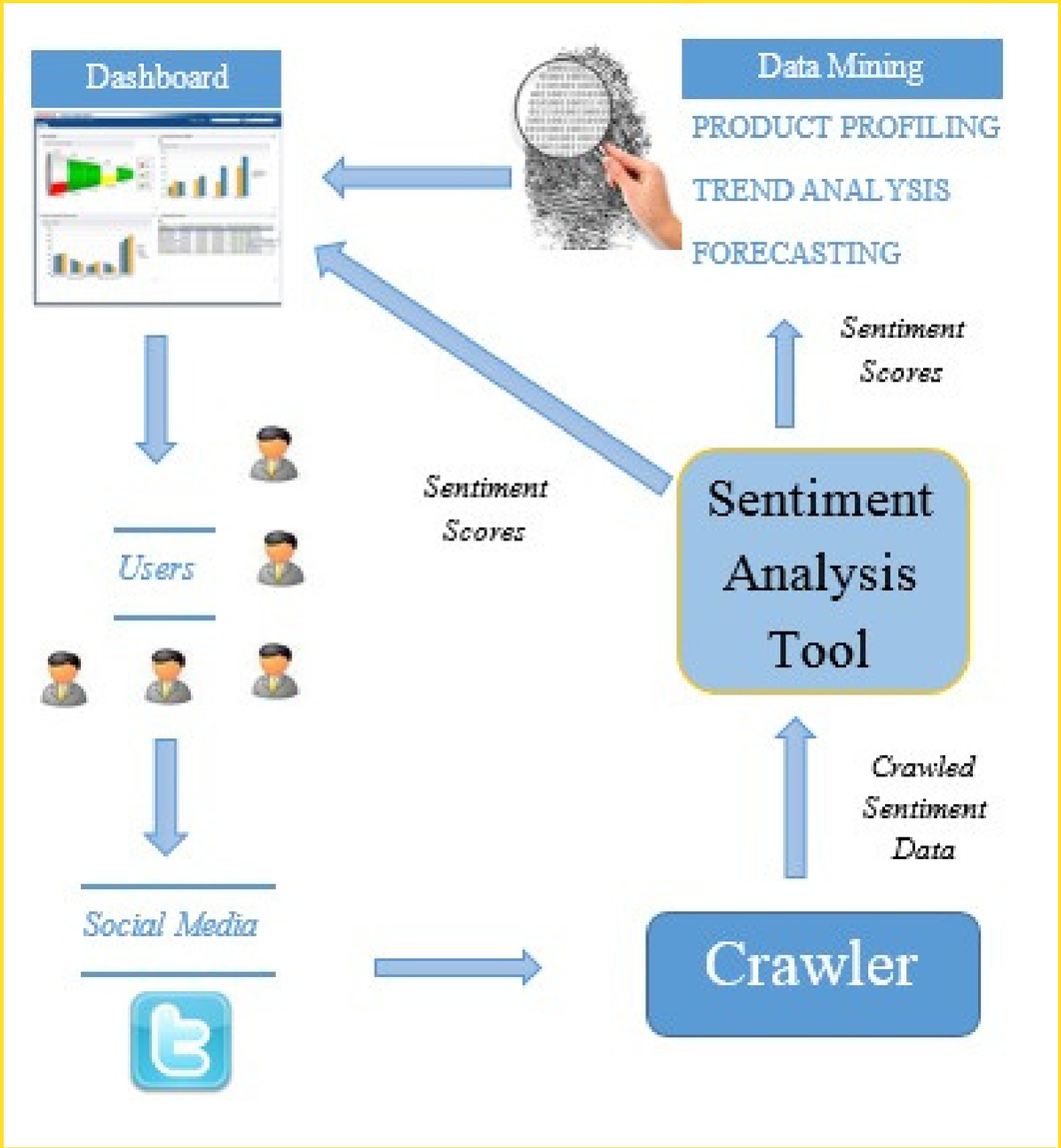
Test the app/website on collected datasets. Perform supervised as well as unsupervised learning

1st week of June onwards

REFINE

Understand the drawbacks/ areas with scope of improvement and try to improve on the same.

BLOCK DIAGRAM



Scope Of Work

Assumptions

Considering all the tweets used for the analysis are honest opinions and don't fall under the umbrella of sarcasm

Constraints

We won't be able to filter out bots/fake accounts created for defamation/glorification purposes

Focus

To develop a website to generate knowledge that can be useful for business environments using people’s attitudes about their products and services

Objectives

Better Customer-Company Connectivity

Providing a platform for companies to analyse client opinions on their products to improve Customer Experience Management.

Product Enhancement

Urging the companies to enhance their product according to the reviews that have been extracted from social media.

Improving Marketing Strategies

Providing analysis regarding various advertisement/marketing campaigns keeping in mind the sentiments of their target audience to enhance Customer Relationship Marketing.

REFERENCES

Sentiment Analysis Its Complicated

Link: https://www.academia.edu/45367598/Sentiment_Analysis_Its_Complicated

A Study on Sentiment Analysis Techniques of Twitter Data

Link: https://bit.ly/3viNeQT

Sentiment Analysis on Twitter Data for product evaluation

http://www.iosrjen.org/Papers/Conf.SICTIM-2019/Volume-1/5.%2022-25.pdf

Sentiment Analysis Of Product Reviews – A Survey

http://www.ijstr.org/final-print/dec2019/Sentiment-Analysis-Of-Product-Reviews-A-Survey.pdf

Sentiment Analysis For Social Media

https://www.researchgate.net/publication/268817500_Sentiment_Analysis_for_Social_Media

Sentiment analysis of twitter data

https://arxiv.org/ftp/arxiv/papers/1711/1711.10377.pdf

THANK YOU

QUESTIONS?
COMMENTS?