"Sentimental Analysis and Prediction tool"

ABSTRACT

The data analysis is the integral part of business administration. Many organizations nowadays hire data scientist for the expansion of business and of their product in their market. Today, in market there are many different companies for one product and the competition to sustain in market is increasing day by day. On an average, Indian users spent 2.4 hours on social media and this stat increases worldwide. Therefore, social media has become a market place for increasing the sale of the products directly or indirectly. Customers usually express their emotions or sentiments on social media about the services offered by organization, how well the product is useful in their daily life or uses of the product, etc. These sentimental reviews on social media play major role in affecting the business and market for an organization in positive, negative or neutral direction. Therefore, there is a need for tool which can analysis the customer reviews and classify them according to sentiments of customers. Twitter is a micro-blogging service built to discover what is happening at any moment in time, anywhere in the world. Twitter messages are short, generated constantly, and well suited for knowledge discovery using data stream mining. We introduce a tool which process tweets in real time and will indirectly help businesses to monitor and grow their market value. This tool will show two main applications of the new system for studying Twitter data: prediction of sentiments on product group by different companies and analysis the past trends.

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Sentiment Analysis and Prediction tool is based on the concept of real time prediction of customer reviews and predict the performance in market. This tool can also be used as prediction for internal working of different departments of large organizations.

2. DESCRIPTION

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Social Media is key player in communications between large organizations and customers. Customers share their idea of various products and give their feedback on promoting some products which are valuable. In large organization, different groups, teams and customers communicates daily through multiple channels. The perception of overall situation from this communication is difficult to understand.

3. SOFTWARE AND HAEDWARE REQUIRENMENTS

3.1 Software Requirements:-

- Any Browser
- Jupyter Notebook
- Spyder
- Anaconda
- Sublime Text
- Any Operating System

3.2 Hardware Requirements:-

- Minimum RAM of 2GB and Minimum hard disk space of 100MB with maximum CPU utilization.
- Smart Phone (or Tablet) or Desktop Computer (or Laptop), with a compatible web browser.

4. TECNOLOGY USED

- Dash Plotly
- Python
- Pandas
- Numpy
- Twitter API
- Profanity Filter
- Flask
- Jinja
- HTML, CSS, JavaScript
- BootStrap
- JQuery

5. MAJOR FUNCTIONALITY

5.1 Sentiment Analysis Module:-

Web API will read the data from the repository like e-mail or in csv format only. User will upload csv file for sentiment analysis Identify whether the sentiment is positive, negative or neutral. After classification of sentiments, the user will be able to see the sentiments via the dashboard and the organization would be able to monitor the progress of departments.

5.2 Report Generation:-

Organization will be able to view the classification of sentiments in pictorial form.

5.3 Predictive Analysis:-

From the reviews, the company can see analysis of its various sectors and predict which sector will perform well in the near future.

6. SYSTEM FLOW CHART

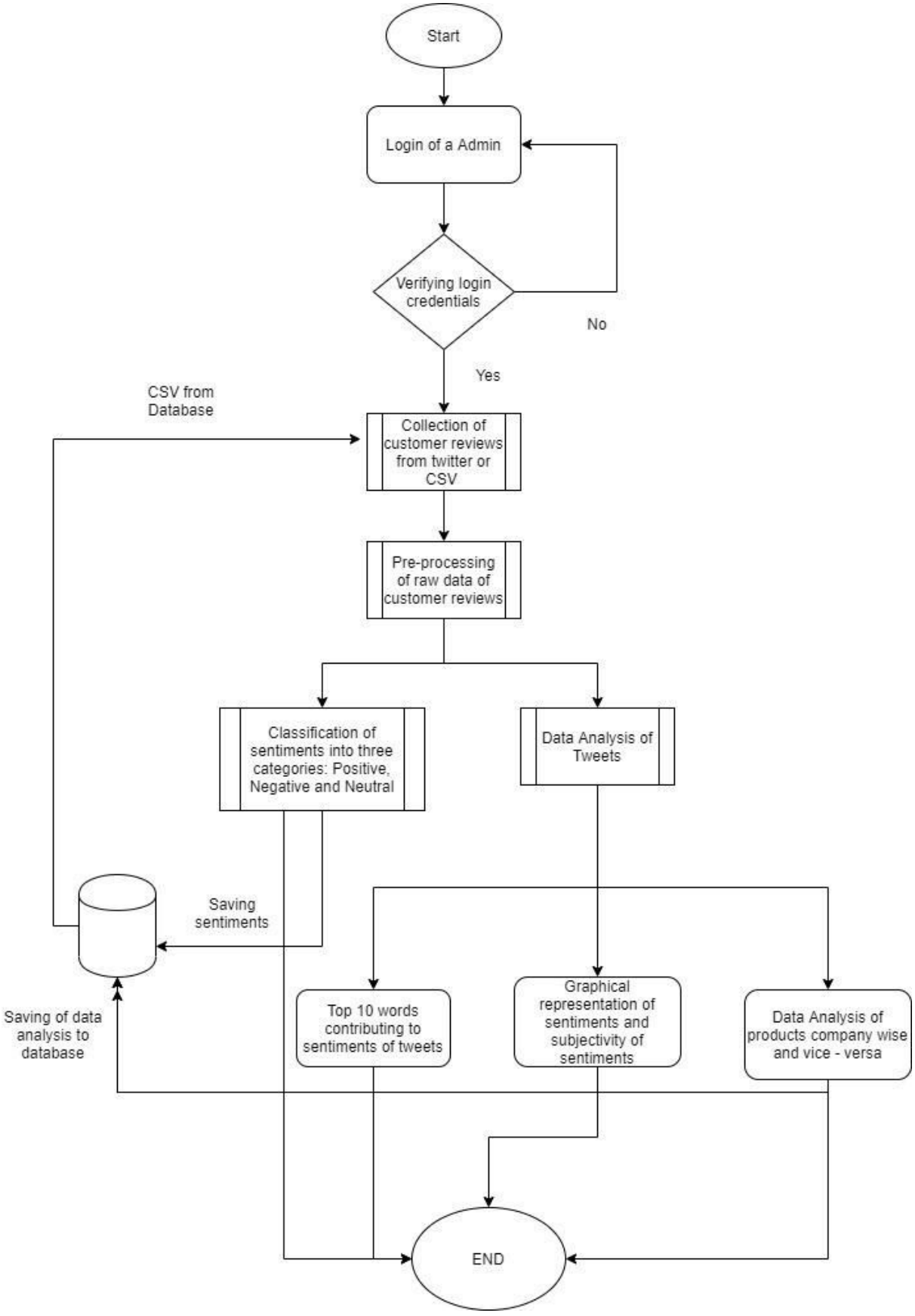

Fig 6.1 System Flow Chart

7. SCREENSHOTS

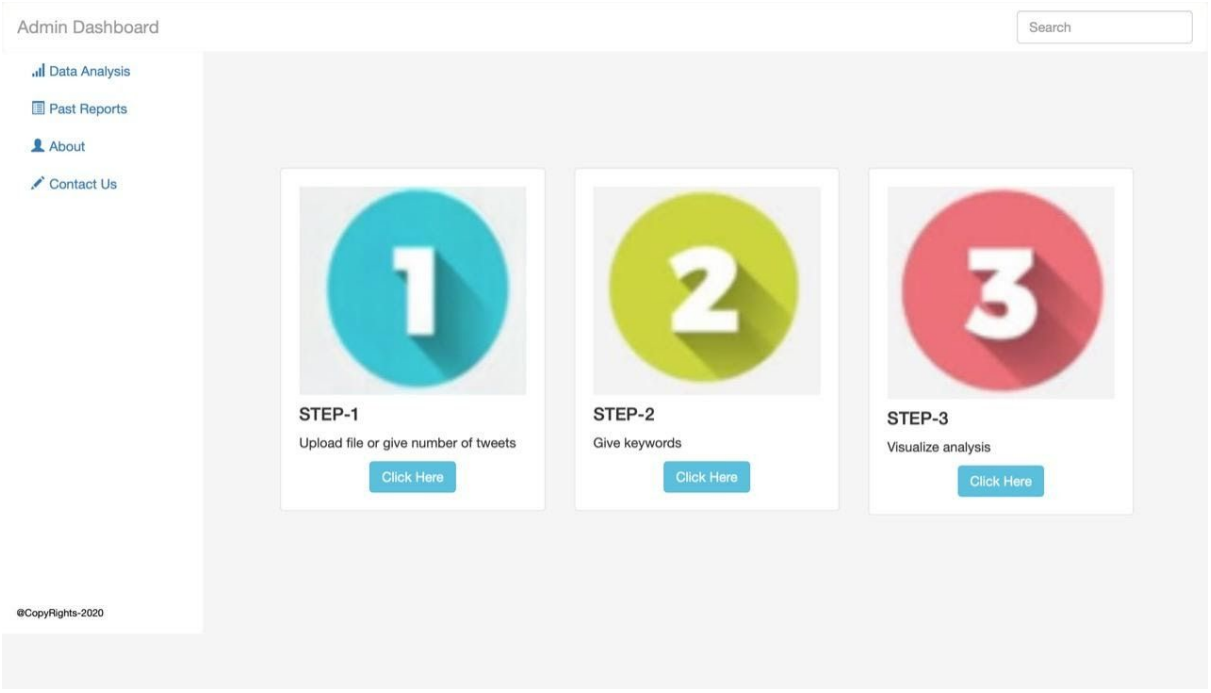

Fig 7.1 Home Screen

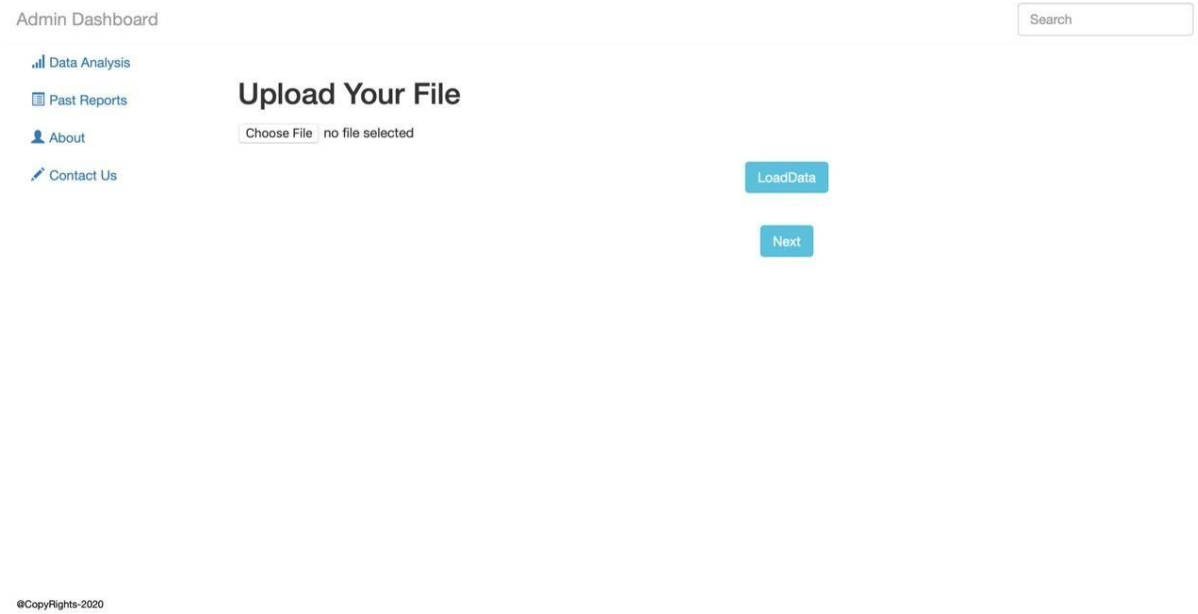

Fig 7.2 File Uploading

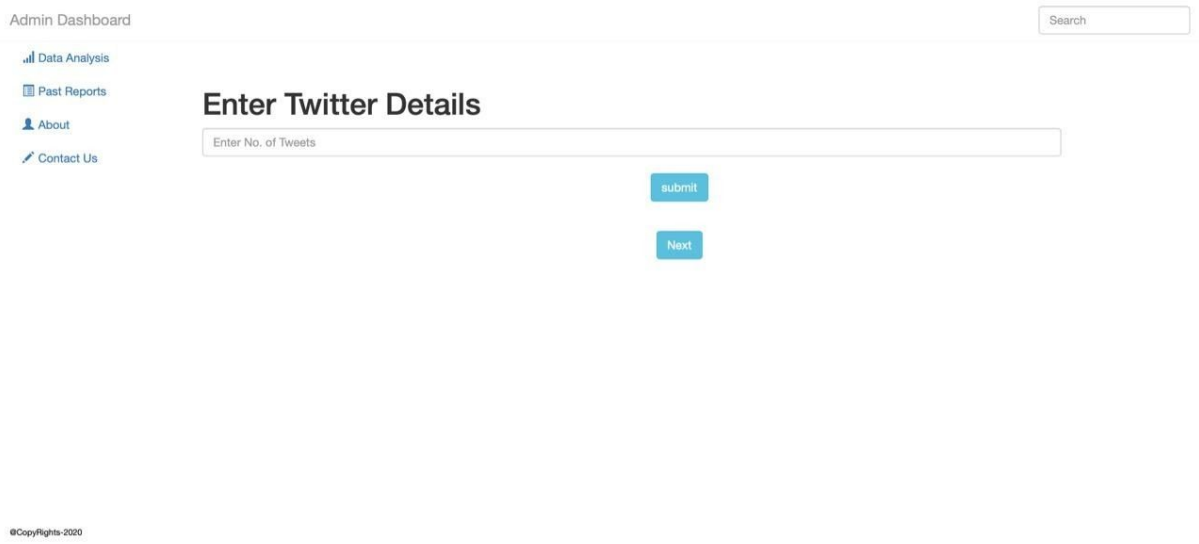

Fig 7.3 Tweet Fetching

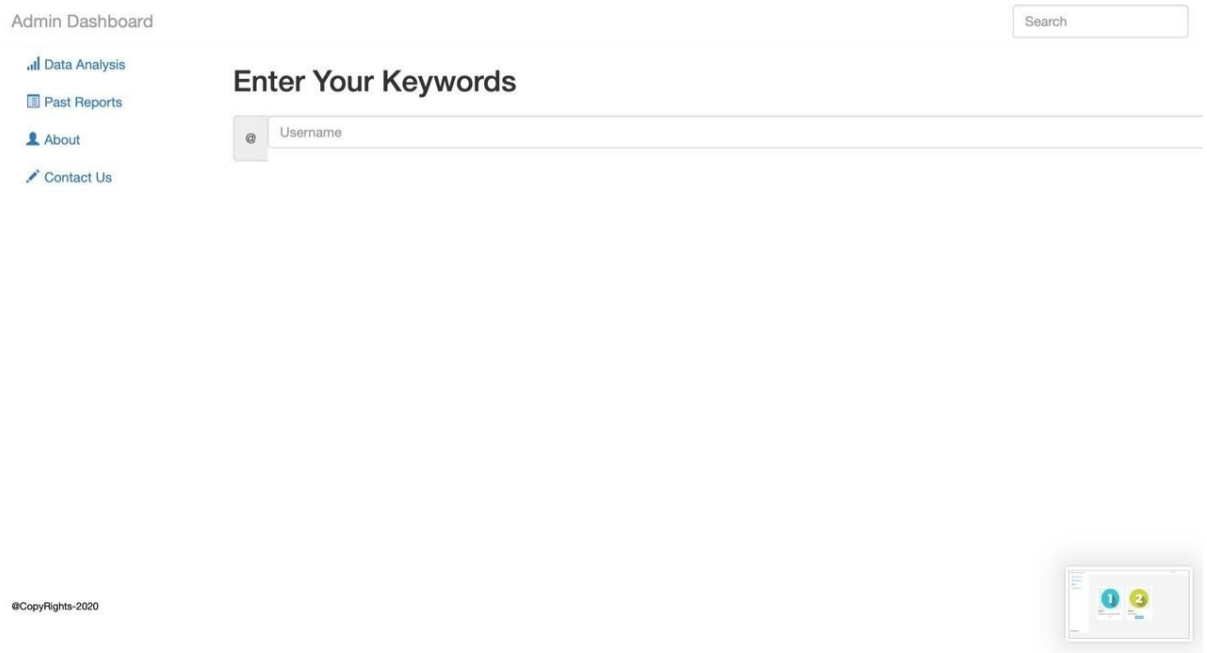

Fig 7.4 Keyword Extraction

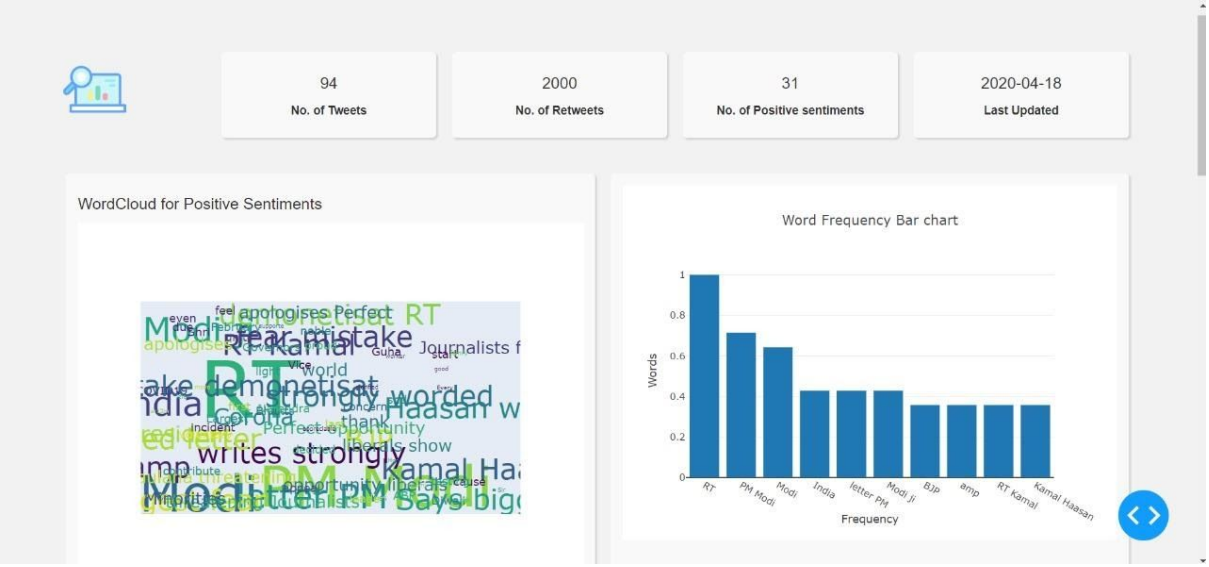

Fig 7.5 Analysis Graph

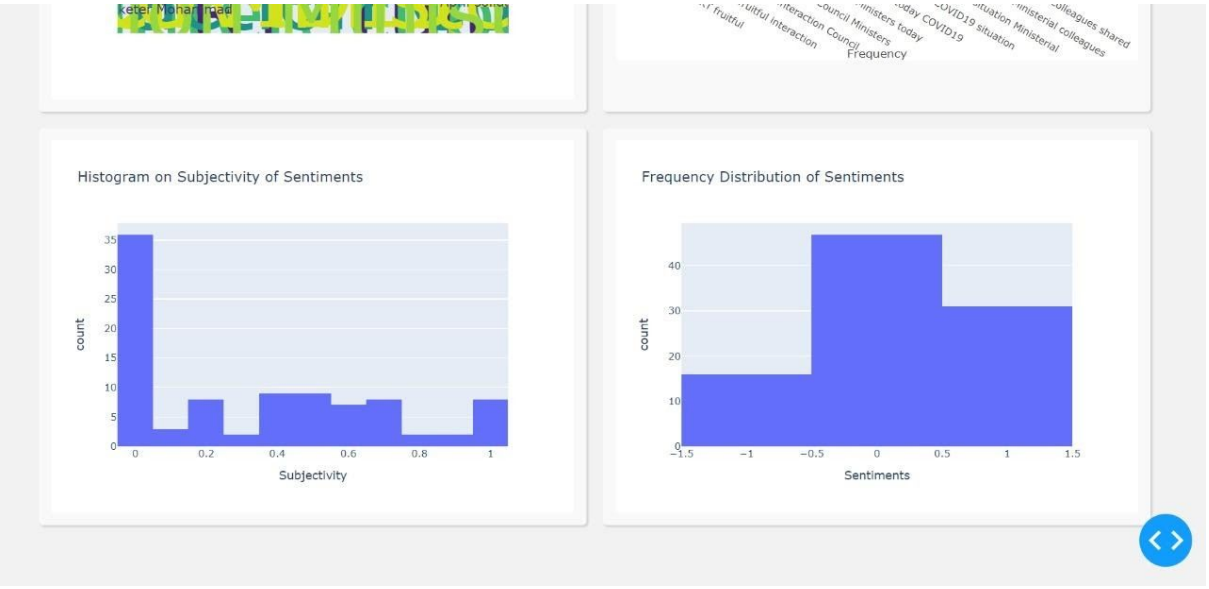

Fig 7.3 Sentiments Graph

8. LIMITATIONS

- This API keys.
- Real time tweets not be given for the sentiments analysis.
- Account of twitter is required to purchase for fetching Twitter Tweets.

9. OUTCOME

In multi social era the perception of different people is different and give different reviews so we analyze the sentiment of the people and apply the business intelligence logics on this positive, negative and neutral sentiments to transform this raw data into meaningful and useful information which enable more effective strategic, tactical, and operational insights and decision-making.

10. FUTURE ENHANCEMENT

1.) This tool is currently being not abled to deployed for real time sentiment analysis for live because the twitter api does not provide access for extraction of tweets in real time. This tool can be extended to real time prediction sentiments in future.

2.) The accuracy of prediction model can be increased in future.

3.) An inference system can be build as a higher level functionality which can give decisions based on customer reviews to organizations for business.

11. REFERENCES

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