Smart Bridge Remote Smart Internship Program

Project Report

Submitted By:
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Project Duration : 18 days

Sentiment Analysis of twitter data Using Deep Learning

Category: Deep Learning

Skills Required:

- Python
- Python Web Frame works
- NLP

Project Description:

Description:

Twitter has grown in popularity during the past decades. It is now used by millions of users who share information about their daily life and their feelings. In order to automatically process and analyze these data, applications can rely on analysis methods such as sentiment analysis and topic modeling.Developing a program for sentiment analysis is an approach to be used to computationally measure customers' perceptions.

Solution :

The model takes the text as input, pre-processes the text and sends it to the neural network. The neural network classifies the text as 0 or 1 based on whether the text is negative or positive respectively. Using this the sentiment of the person who is sending the tweet can be understood and tweet can be analysed.

Sentiment Analysis :

Sentiment analysis is the interpretation and classification of emotions (positive, negative and neutral) within text data using text analysis techniques. Sentiment analysis allows businesses to identify customer sentiment toward products, brands or services in online conversations and

Need for Sentiment Analysis :

Business: In marketing field companies use it to develop their strategies, to understand customers' feelings towards products or brand, how people respond to their campaigns or product launches and why consumers don't buy some products.

Politics: In political field, it is used to keep track of political view, to detect consistency and inconsistency between statements and actions at the government level. It can be used to predict election results as well!

Public Actions: Sentiment analysis also is used to monitor and analyse social phenomena, for the spotting of potentially dangerous situations and determining the general mood of the blogosphere.

Strategy And Workflow :

1. Data Collection
    a. Collect the dataset .
2. Text Pre-Processing
    a. Import the dataset.
    b. Remove punctuations, numbers.
    c. Convert each word into its lower case.
    d. Stemming.
    e. Splitting data into train and test set.
    f. Importing the mode building libraries.
    g. Initializing the model.
    h. Adding input layer, hidden layer and output layer.
    i. Configure the learning process.
    j. Train and test the model.
    k. Optimize the model.
    l. Save the model.
    m. Predictions.
3. Application Building
    a. Create a HTML file.
    b. Build python code

Literature Survey :

Sentiment analysis is an evolving field of study which involves the process

of evaluating and distinguishing the opinions or emotions expressed in a given text.
Twitter promotes unregulated communication by providing an easily accessible medium where millions of people tweet everyday to contribute their thoughts and viewpoints to the world. This paper presents a review on the techniques of Sentiment Analysis on the Twitter Data.
With this project, we present a brief review of all the work done on twitter sentiment analysis so far and elaborate the models and their methodologies used.
We have surveyed all the papers published in this field and focused on the recent approach so as to facilitate the development of promising avenues of future projects and research. Index Terms sentiment analysis, twitter data.

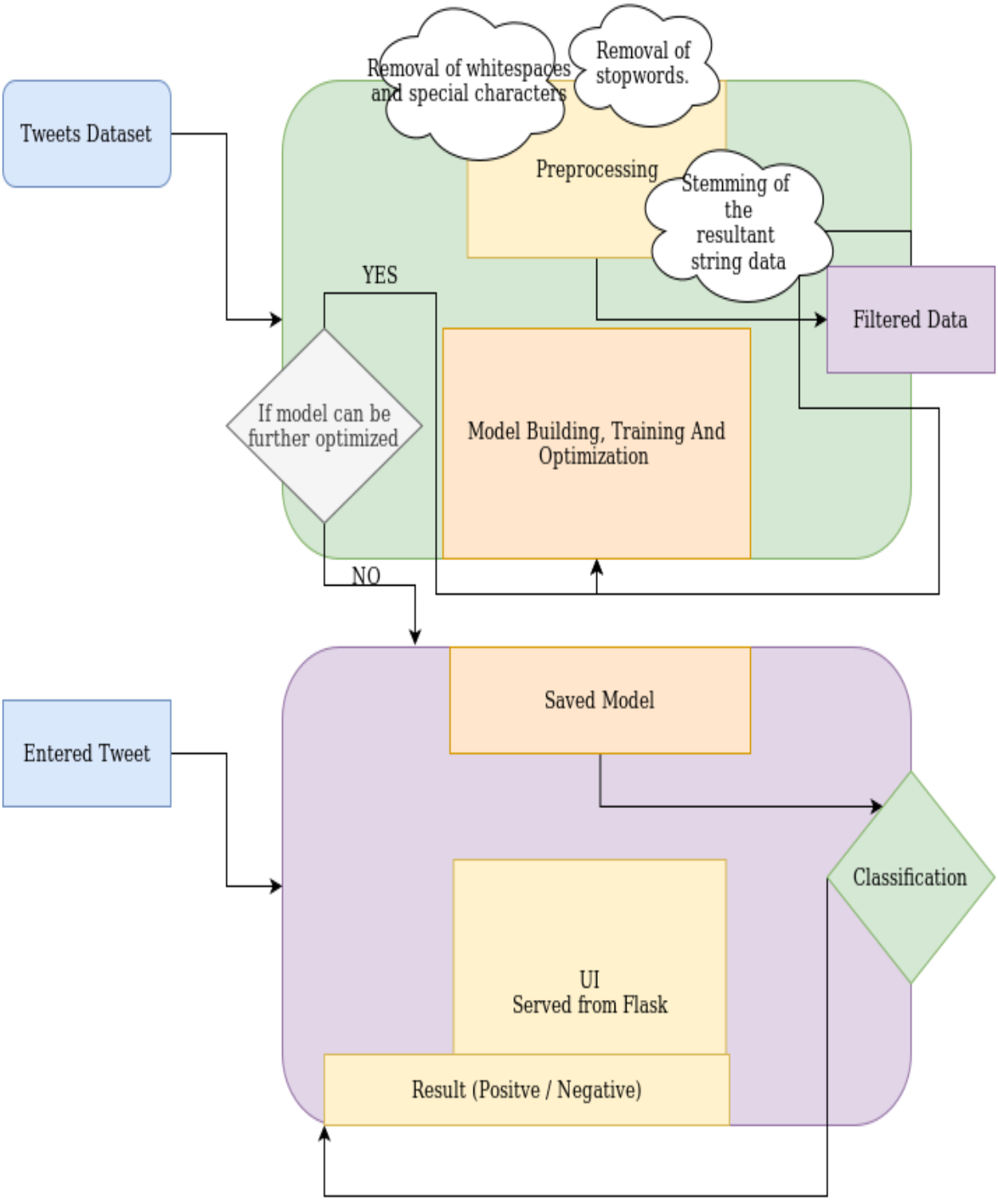
Existing Problem:

● Existing system akes a stored dataset into consideration.
● It fails to determine the impact the results might or will have in the respective field.
● Existing ystem does not allow the retrieval of data bases in the query entered by the user.
● Existing syste does not provide accurate feature selection.

Proposed Solution:

● Proposed system gives you the impact the results and statistics will have on the respective fiels.
● Proposed system allows retrieval of data based on the query entered by the user.
● Proposed system will provide accurate feature selection.

Theoretical Analysis :



Advantages and Disadvantages :

Advantages:

● The use of this information can be applied to make wiser decisions related to the use of resources, to make improvements in organizations.
● Tracking people's feelings on products, services and events, which allow enterprise managers to have knowledge and parameters to decision-making.

Disadvantages:

● For they are usually coupled with hashtags, emoticons and links, creating difficulties in determining the expressed sentimen

Applications :

● Social media monitoring.
● People analytics and voice of employees.
● Voice of customer & Customer Experience Management.
● Regulatory Compliance.

Conclusion :

Sentiment analysis refers to the management of sentiments, opinions, and subjective text. The demand of sentiment analysis is raised due to the requirement of analyzing and structuring hidden information, extracted from social media in form of unstructured data.
The sentiment analysis is being implementing through deep learning techniques. Deep learning consists of numerous effective and popular models, these models are used to solve the variety of problems effectively. Different studies have been discussed in this review to provide a deep knowledge of the successful growing of deep learning applications in the field of sentiment analysis. Numerous problems have been resolved by

having high accuracy of both fields of sentiment analysis and deep learning.

Future Scopes :

This model can form a base to predict a larger group of data. Not only positive or negative it can predict the exact emotion or the sentiment based on certains parameters of data. Hence, it can be a powerful tool in analysing data and sorting it based on the positive or negative effects.

References :

https://www.wikipedia.org/
www.researchgate.net
https://towardsdatascience.com/