Sentimental Analysis for Products Rating

Abhijeet Singh[1], Navchetan Kr. Singh[2], Harshad Rathod[3], Sneha Ujgare[4], Prof. Prema Desai[5]

Students, Department of Computer Engineering[1,2,3,4]

Guide, Department of Computer Engineering[5]

Smt. Kashibai Navale College of Engineering, Pune, Maharashtra, India

Abstract: *Sentimental analysis for products rating is a system, which basically rates practically any product based on some hidden sentiments extracted from the comments. This application uses deep learning so as to achieve optimum results. It is an E-Commerce web based platform, that gives the facility to the registered user to view the products and their features along with the option of giving reviews about the product. User can keep track of comment of other users as well. System will then examine the comments of different users and will sort the product accordingly. E-Commerce is basically doing business based on computer networks. A person with just the touch of a finger can access all the facilities of the Internet to buy or sell the products. Unlike traditional commerce that was carried out physically by person which required to go and fetch their desired products, e-commerce has made it easier for people to drastically decrease physical work and to save time.*

Keywords: Sentimental analysis.

I. INTRODUCTION

Here we have designed an robust and reliable feedback delivery mechanism for Products Rating system that detects hidden sentiments in comments and rates the product accordingly. The system uses deep learning technology that fetches an optimum outcome. This project is a web based application where the registered user will be able view the product and product features and will comment about the product. User can keep track of comment of other users. System will further examine the comments of different users and will sort the product accordingly. We use a database of sentiment based on several keywords along with the polarity whether positive or negative and then based on these keywords extracted in user comment is ranked. Comment will be further examined by comparing the comment with the keywords stored in database. The System crunches comments of various users, based on those comments, system will decide whether the product is good, bad, or worst. Once user login into the system he can watch and analyze the product and product features. After viewing product user can give reviews about the product. User can also view comment of other users and even companies for that matter. It is then admin's responsibility to add product to the system and to add keywords in database. User can easily get their desired product for his usage.

This application also works as an advertisement tool which makes many people aware about the product. This system is also useful for the user's who need a reliable review about a product.

II. MOTIVATION

E-commerce is growing rapidly nowadays, and thus the competition to provide more reliable products to the customer. Every service provider is using different tactics to draw customers attention. Major factor determining the growth of any service provider is their customer's response. towards offered services. Our project will improve the response count for the product by converting reviews or feedbacks into ratings.

The project objective is to create web application to utilize functionality of sentiment analysis. Basic idea behind the project is to provide a specification to e-commerce websites which will help converting reviews into ratings using BERT algorithm.

II. SYSTEM REQUIREMENTS

For methodical use, every system needs configured hardware components along with respective drivers and dependency software systems. These prerequisites and requirements are popularly termed System requirements, these proposed requirements act as a regulative structure for software. In many cases two different types of requirements are mentioned

which are: Recommended and Minimal. Because of advancement in technology and industry norms these technical specifications continuous changes and increase over a period of time. We can also define system requirements as platform specifications which must be met in order to run the given software smoothly without any technical obstacles and difficulties.

III. SOFTWARE REQUIREMENTS

In accordance with process of software engineering software requirements are specifications which are required to run program on system or dependencies which must be satisfied in order to execute software successfully. Summary of such requirements is as follows:

1. A prerequisite or potential that is preoccupied by software or its component to met a standard specification or any other related criteria.
2. A prerequisite or a potential that is preoccupied by the system to complete the given task and finalize the outcome of intended objectives.
3. A well-documented depiction of a prerequisite or potential as in 1 or2.

Software requirements can be assembled as follows:

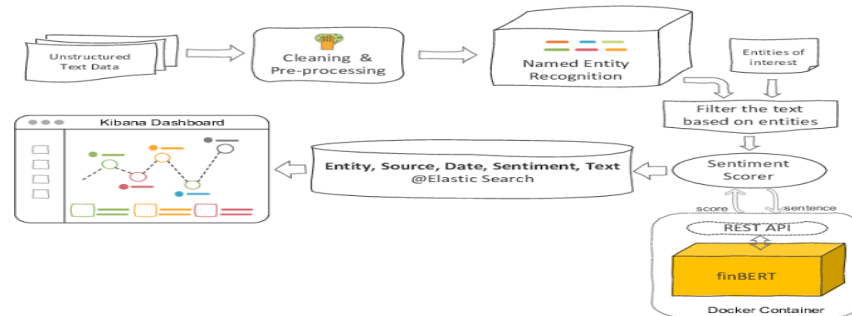| Platform	Windows 8+ / Linux 16.04+
Drivers	Display updated drivers
Dependencies	Python 3.7, Django, Html CSS, MySQL
Libraries	NumPy, pandas, scikit-learn, Google, ML kit
ML Models	Multiple Linear Regression, k-nearest neighbors

Table: Software Requirements
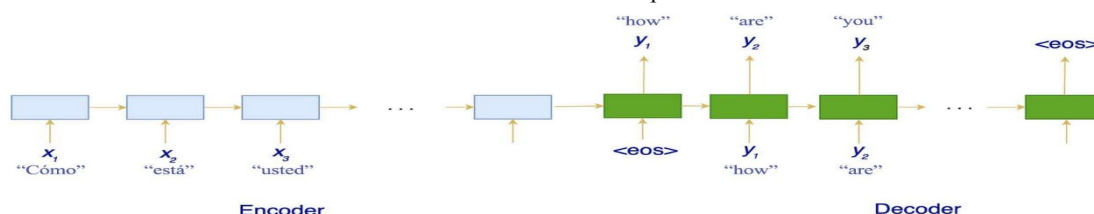
3.1 Bert Algorithm
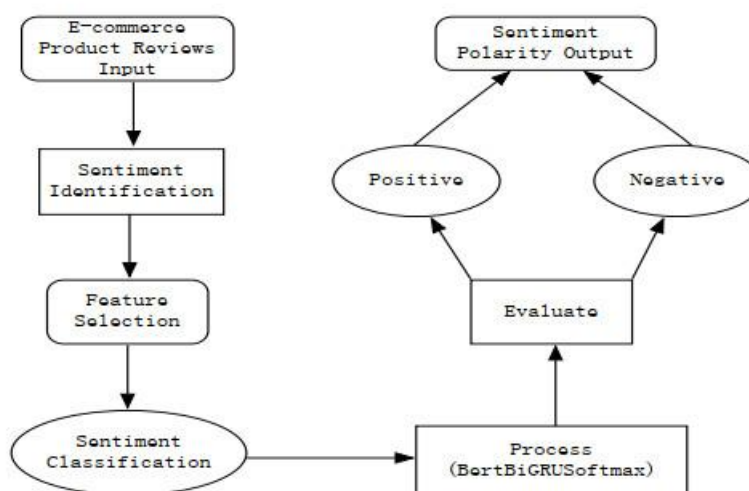
Fig: Data Flow Diagram

Fig: Deployment Diagram

This application has been developed through object-oriented modelling and iterative model paradigm to ensure high performance and guaranteed results. OOP concepts provide high grounds for developing such high processing power consumption application. Utilization of machine learning algorithms made it significant need for use of OOP based coding pattern. Furthermore, iterative programming speeds up delivery process and provides general idea about application flow in early stages of project development.

By integration of OOP with iterative model, a strong arch-type is created which further helped in code reuse, code maintainability and rigorous testing. All these parameters decide project success within stipulated time frame. Deliverables were successfully achieved without any major hiccups. Analysis model which was generated in design phase of project remained consistent throughout the process, this in indicates robustness of model generated in early stages.

IV. CONCLUSION AND FUTURE WORK

We are developing this project with an overarching view of ultimately covering the entire digital landscape. It has enough room to further evolve into something better version where we can provide additional features and applications to it. As far as future work is concerned, we can help people to get their desired product in most reliable way possible. The addition of more features can improve the accuracy of prediction.It will improve user discretion while product purchase through a trusted rating system. This will profoundly impact our ability to target niche audience.

REFERENCES

[1]. Deep Learning for Hate Speech Detection in Tweets PinkeshBadjatiya , Shashank Gupta, Manish Gupta, Vasudeva Varma

[2]. DepecheMood++: a Bilingual Emotion Lexicon Built Through Simple Yet Powerful Techniques Oscar Araque, Lorenzo Gatti , Jacopo Staiano, Marco Guerini

[3]. Expressively vulgar: The socio-dynamics of vulgarity and its effects on sentiment analysis in social media Isabel Cachola, Eric Holgate, Daniel Preot¸iuc-Pietro, Junyi Jessy Li

[4]. Multilingual Twitter Sentiment Classification: The Role of Human Annotators Igor Mozetiˇc, MihaGrˇcar, JasminaSmailoviˊc

[5]. MELD: A Multimodal Multi-Party Dataset for Emotion Recognition in Conversations SoujanyaPoria, Devamanyu Hazarika, NavonilMajumder , GautamNaik , Erik Cambria , Rada Mihalcea

[6]. BERT: a sentiment analysis odyssey

[7]. Building the Design of E-Commerce

[8]. A Review Paper on E-Commerce

[9]. Design and Implementation of a Vue.js-Based College Teaching System.

[10]. Web Applications WithDjango