DSA Model for Review Analysis

Prof. K. R. Pathak[1], K.B.Godge[2]

[1] *Assistant Professor, Computer Engineering Department, PREC Loni, Maharashtra, India*
[2] *Student, Computer Engineering Department , PREC Loni, Maharashtra, India*

ABSTRACT

In todays life use of social media like Facebook, twitter etc. get increases day-by-day. In these type of social media sentiment analysis plays important role to analyze the public review and opinion related to the past. In this survey paper we study the dual sentiment analysis (DSA) method which considers two sides of one review. Sentiment analysis is also called as opinion mining. Focuses on the DSA method, which includes dual training and dual prediction to make a use of original and reverse review sample in pair for training a statistical classifier and make prediction. Extending our Dual sentiment analysis from polarity (positive, negative) to 3 class(positive, negation, neutral)sentiment classification, finally developing the corpus based method for constructing a pseudo-antonym dictionary.

Keyword : - *Natural language processing, machine learning, sentiment analysis, opinion mining, polarity classification.*

1. INTRODUCTION

Internet is a collection of large amount of text containing opinions and emotions. Sentiment analysis has emerged as a method for mining opinions from such text archives. Sentiment Analysis and Opinion Mining based on the study of sentiments, attitudes, reactions, their emotions and evaluation of the content of the text. Sentiment analysis is used to analyze people's opinions, attitudes, reactions, sentiments, evaluations towards entities, such as services, products, organizations, individuals ,events, topics, issues and their attributes. Sentiment Analysis is also known as Opinion Mining. Sentiment Analysis or Opinion Mining is nothing but the computational study of people's opinions, attitudes and emotions towards an entity. The SA is to identify the sentiments they express and then classify their polarity. Generally sentiment analysis have two types of polarity: i) Positive polarity and ii) Negative Polarity. The data which having the positive opinion comes under the positive polarity. (e.g. awesome, happy, nice, joy, fun, excellent).The data which having the negative opinion comes under the negative polarity. (e.g., bad, worst, rubbish, terrible). are extending the polarity classification (i.e positive-negative) to three classes (i.e positive-negative-neutral) Polarity shift is one type of linguistic phenomenon which can reverse the sentiment polarity of the text. Negation is the most important type of polarity shift. Suppose are adding the word "don't" to a positive statement "I like this place" in front of like word, the sentiment of the word is directly changes from positive to negative. In this survey paper propose a simple Dual Sentiment Analysis(DSA)model to address the polarity shift problem in the sentiment analysis. Classification. therefore we proposes the dual training(DT)and dual prediction(DP)algorithm tp make a use of original and reverse review samples in pair for statistical training and making the predictions. In DP ,predictions are made by considering two sides of one review. In DT the classifier is learnt by maximizing a combination of likelihoods of the original and reversed training dataset. finally developing a corpus-based method for constructing a pseudo-antonym dictionary.

2. System Architecture Dual Sentiment Analysis

Figure 1, shows the block diagram of Dual Sentiment Analysis(DSA) model, here are having two data sets that is,original training set which includes the original review, and reverse training set which includes exact reverse of original review.in dual training are trying to collect the similar properties of review and in dual prediction taking both the original and reverse review in consideration ,and the predictions take place to get the final result both the original and reverse reviews are considered for sentiment analysis.
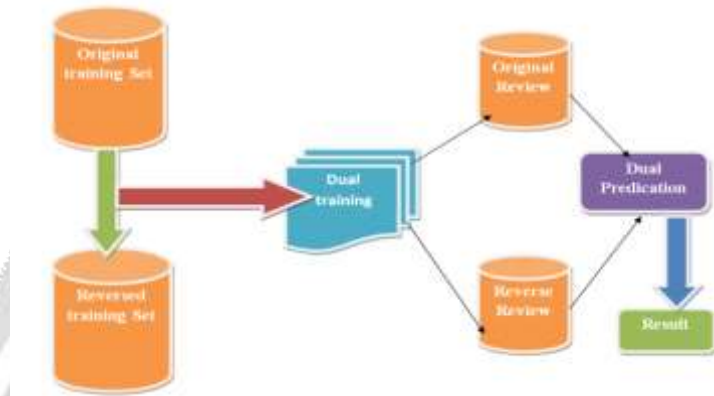

Figure-1:   **Dual Sentiment Analysis Model**

3. MATHEMATICAL MODEL

Input :

Let ,   U - User ,

P - Neural,

N - Non Neural Word.

U(Z)= u1,u2,u3,…..un;

P(Z)=p1,p2,p3,……pn;
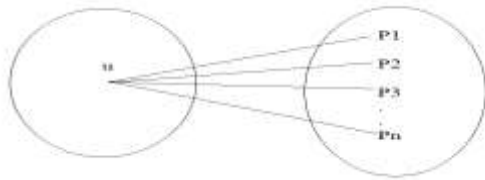
N(Z)=m1,m2,m3,….mn;

R(Z)=r1,r2,r3,…..rn;

U(Z) - Number of users

P(Z) - Number of positive letters.

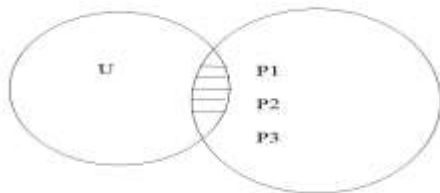 N(Z) -Number of negative letters.

$$Z(\mathbf{P}) = \begin{cases} 1, & \text{if } L = 0; \\ \prod_{i=1}^{L} F(u_i, u_{i+1}) & \text{otherwise}(\text{i.e., } L \geq 1). \end{cases}$$
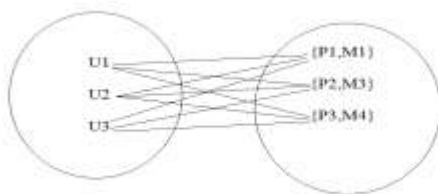
U(Z) UNION P(Z)

Here trying to match the properties of set U with every element of P.

U(Z) INTERSECTION P(Z)

- Here common words trying to match,the properties of set U with every element of P.

- Above diagram shows how to test the neural type letters.
- Each query having poitive and negative letters.

Figure-2: Mathematical Model of the Proposed System

4. CONCLUSION

At the end survey conclude that DSA   model is more beneficial for sentiment analysis as compare to the previous methods, it is a data expansion technique to address the polarity shift problem, DSA model includes two parts i.e dual training and dual prediction for review analysis.

5. REFERENCES

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