A Survey on Polarity Checking of the Text

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Abstract — Now a days polarity has become the challenging task. The applications such as sentiment analysis and opinion mining are important for the polarity classification of words. Sentiment analysis is an NLP task that extracts sentiment from various text forms. It analyzes emotions, feelings and the attitude of a speaker or writer towards a context. The main goal of sentiment analysis is the detection of a positive and negative polarity or neutrality of a sentences. The type of NLP is opinion mining. It is tracking the mood about the particular product. With people using emotions, to express, stress, or disambiguate their sentiment in written text on the web.

Keywords— Natural Language Processing, Hidden Markov Model and Particle Swarm Optimization.

I. INTRODUCTION

The applications such as sentiment analysis and opinion mining are essential for polarity classification of words. Various number of classes are defined. The classes of polarities can be either “positive”, “Negative”, “good”, “bad”, “inferior”, “superior” etc. The polarity of word is an important task in NLP. The input of the sentence gives the sentiment analysis of the output. For e.g., Sentiment dictionary sends the input of the sentence, than the code analysis that sentence and gives the sentiment output of the sentence either positive, negative, happy, sad etc. The comparison of input and output gives the polarity. A sentiment word Dictionaries number have been constructed manually. Sentiment Dictionaries have numerous inaccuracies. In different dictionaries with different polarities, the same word appears. The researchers have used wordNet of Semantic WordNet (SWN) which gives limited area of checking and thus have limited accuracy.

II. LITERATURE SURVEY

1. Eduard C. Dragut, H. Wang, P. Sistla, C. Yu and W. Meng, “Polarity Consistency Checking for Domain Independent Sentiment Dictionaries,” in March 2015. The literature survey showed that the Opinion Mining and Sentiment Analysis was one of the practice applications. A sentiment word dictionaries have been created. They had noticed that these sentiment dictionaries have large numbers of inaccuracies. They had introduced the concept of consistency of polarity words in sentiment dictionaries in this paper. Two types of algorithms were used and they were Hidden Markov Model (HMM) and Particle Swarm Optimization (PSO).

2. L. Maas, R. E. Daly, P. Pham, D Huang, A. Ng, and C. Potts, “Learning word vectors for sentiment analysis” in 2011. The unsupervised vector based to get close to semantics could model rich lexical meanings, but they were fail to hold sentiment information that was most important to many of the word meanings and important for the great pasture of Natural Language Processing tasks. The general approach has proven useful in tasks such as word sense disambiguation, named entity recognition, POS tagging, and document retrieval[2].

3. Hassan and D. Radev, "Identifying text polarity using random walks,”in 2010. The polarity of words for identifying automatically was a most important work in NLP. It has applications in sentence filtering, sentence classification, online discussions of mining, study of responses to reviews, and the close study of product view. They proposed a technique for the polarity of words to identify. They had applied a Markov random walk model for creating a polarity to a great word relatedness graph and for any word[3].

4. R. Agerri and A. Garcia-Serrano, “Q-wordnet: Extracting polarity from wordnet senses,"in 2010. The literature survey showed that in previous year this paper was presented Q-WordNet, a lexical resource consisting of WordNet senses annotated automatically by positive and negative polarity. It was started from six synsets from known polarities. They had used the Data Driven method[4].

5. D.Rao and D.Ravichandran, “Semi-supervised polarity lexicon induction language”in 2009. The literature survey showed that they had presented an extensive study on the problem of detecting polarity of words. They had considered the polarity of a word to be either positive or negative. The literature survey showed that they had presented an extensive study on the problem of detecting polarity of words. They had considered the polarity of a word to be either positive or negative[5].

6. Esuli and F. Sebastiani, “Determining the Semantic Orientation of terms through gloss classification” in 2005. Sentiment classification was a new subdiscipline of text classification, but it expressed with the opinion. It has a rich set of applications which is expressed in online forums about political candidates or opinions about products. They had used the algorithm of machine learning that could be used to classify words into different polarities[6].
7. J. Kamps, M. Marx, R. Mokken, and M. Rijke, “Using WordNet to Measure Semantic Orientations of Adjectives” in 2004. The conventional WordNet measures of similarity or distance focus almost on WordNet’ taxonomic relations. This was effectively restricted their relevant to the syn categories of noun and verb. They had investigated a graph theoretic model of WordNet most important relations-synonymy[7].

III. CONCLUSIONS
The As per the study it is concluded that the polarity has become a challenging task to get the efficient accuracy for the system. The polarity of word is an important task in NLP. It has application in text classification, analysis of product view, text filtering, mining online discussions and analysis of responses of survey. Hence it can be concluded that the combination of the output of the Hidden Markov Model and the Particle Swarm Optimization algorithms increases the accuracy for the system.

REFERENCES