Mobile Computing Opinion Mining and Sentiment Analysis

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Abstract— The recent development of Information Technology has raise up the usage of various Social networking sources like Twitter, Blogs, Whatsappp, Facebook etc. People from all over world express their open opinion at anytime, anywhere on any subject. Opinions are generally information, views, ideas about person, product or on anything, maintaining authentication of an opinion or its evaluation is still an issue, and that will leads to demand for implementation of analysis. ,High-performance evaluation and fast processing computing systems are capable of performing evaluation of opinion or idea or sentiment of any individual. This research is directed towards opinion mining in field of the agriculture, where farmers put their opinion on any related topic of agriculture and at the same time others farmers can view and analyze those opinions. There is a need for developing alternatives of agriculture's evaluation with growing demand of digital India.

Keywords— Opinion Mining, Sentiment Analysis, Pre-processing, Analysis, Opinion.

I. INTRODUCTION

Sentiment analysis and opinion mining is the field of computer science in which tools of software that analyses people's opinions, sentiments, evaluations, attitudes, and emotions from written language. It is one of the most active research areas in natural language processing and is also widely studied in data mining, Web mining, and text mining. In fact, this research has spread outside of computer science to the management sciences and social sciences due to its importance to business and society as a whole.

The growing importance of sentiment analysis coincides with the growth of social media such as reviews, forum discussions, blogs, micro-blogs, Twitter, and social networks. As a result there is a huge volume of opinionated data recorded in digital form for analysis.

Opinions on all the world wide entities are available on the web. There are many ideas on World Wide Web about various fields like politics, sports, education, marketing, history, agriculture and science. Opinions are expressed in the form of natural language.

All the social media like Twitter, MySpace, LinkedIn, Facebook, YouTube and many others have gained so much reputation that they cannot be ignored[1]. Opinions of the person are differing from person to person. In a recent days social networking sites are easy way to collect opinions from the general public. The working mechanism of sentiment analysis is shown in the following figure 1.

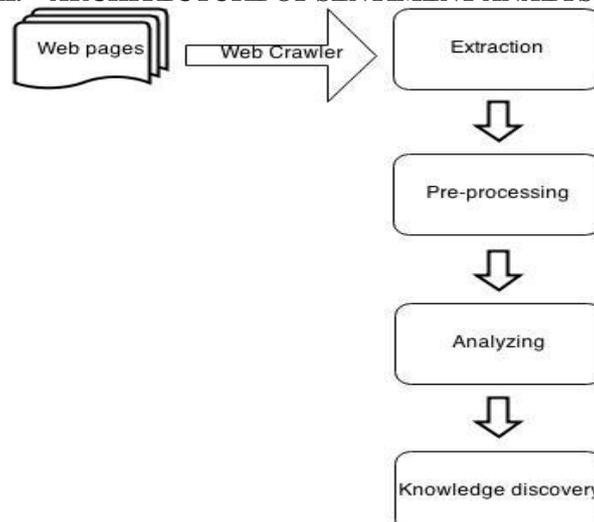## II. ARCHITECTURE OF SENTIMENT ANALYSIS

Figure 1: Working Mechanism of Sentiment Analysis.[1]

Above given figure indicates the process of extracting knowledge from capture data. The data can be extracted through web crawler then it is to be pre processed so that it can be analyze for the knowledge purpose and retrieve the opinion in the form of positive, negative or neutral form.

III. LITERATURE SURVEY

The literature study has been done and it is briefly summarized as below.

Rushabh shah et al. [1] and Pravesh Kumar Singh et al. [5]in their research articles provide the basics of opinion mining, sentiment analysis and the challenges. They provide information on recent trends, applications of sentiment mining, different fields where it is used and also lot of useful information on the current research work being carried out in this area of data mining. Also, the basic workflow of the sentiment analysis process has been explained extraordinarily. Further, they also exemplify the challenges and the future research being planned in the field of sentiment and opinion mining. Moreover, they also explain the Classification Techniques; categorization of work done for feature extraction and classification in opinion mining and sentiment analysis. In addition to this, performance analysis, advantages and disadvantages of different techniques are also appraised like Naïve Bays Classifier, Support Vector Machine, and Multilayer Perceptron.

Stavros Valsamidis et al. [2] and Samhaa R. El-Beltagy et al. [3] have discussed Testing and implementation methodology. They also present the various testing methodology, the challenges and opportunities of the blogs for agriculture in terms of analyzing the information which is stored in them. They used techniques in an experiment blog with the aid of the Rapid Miner software for opinion mining. This framework may thus helps in establishing baselines for opinion mining tasks in agriculture.

ArtiBuche et al. [7] proposes the work on how text is classified by Navie Bayes algorithm and also explain Hidden Markov Model to calculate the Entropy and Purity measure.

Bakhtawar Seerat et al. [8] have discussed the work on how opinions are being extracted from online reviews and challenges of opinion mining.

BlessySelvam et al. [9] proposes different approaches of sentiment classification and the existing methods with the framework.

Dongjoo Lee et al. [10] have discussed to use the PMI method to use for large corpus to achieve higher accuracy. Also they discussed the tools used.

S.Chandrakala et al. [11] proposes the recent work on sentiment analysis and its related tasks with future challenges.

S.Padmaja et al. [12] proposes a work on commonly used Machine Learning Models for text classification and an overview of the most popular machine learning algorithm used in sentiment analysis.

Raisa Varghese et al. [13] have discussed the different levels of sentiment analysis and the major challenges involved in sentiment analysis.

Sindhu et al.[14] proposes a systematic flow and Machine learning approaches to optimize the performance.

Vijay .B.Raut et al. [15] have compared the methods and produced the summary of different approaches used for opinion mining and the results obtained.

G.Vinodhini et al. [16] have discussed overviews of different opinion mining techniques with approaches used.

Ayesha Rashid et al. [17] proposed the drawbacks of different sentiment level and the techniques used in Opinion mining.

Nidhi Mishra et al, [18] presents the insights into opinion mining at different levels.

NileshM.Shelke et al. [19] compares the accuracy using Navie Bayes, Maximum Entropy and Support Vector.

Dr.RituSindhu et al. [20] proposes different levels of analysis and issues in sentiment analysis.

DavidOsimo et al. [21] have discussed an outline for discussion upon a new Research Challenge on Opinion Mining and Sentiment Analysis.

IV. SCOPE OF RESEARCH

India is an agricultural country. Agriculture is the main occupation in India. Two-third of population is dependent on agriculture directly or indirectly. It is not merely a source of livelihood but a way of life. By doing literature survey it is noticed that there is a scope of developing mobile apps with the help of opinion mining and sentiment analysis for agriculture field in country like the India.

This opinion mining technique will be helpful in various fields for retrieving opinion from general public like evaluate various scheme of government whether it is benefited to the end user or not and from that result concern organization or applet authority take corrective measures to satisfy need of general public.

V. CONCLUSION

In this paper concept of mobile computing in the field of opinion mining and sentiment analysis has been discussed ; from the literature review described above. Moreover it also includes various applications area where mobile computing applications will be apply for quick and accurate result.

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