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STUDY OF IMPROVE THE E-LEARNING WITH SENTIMENTAL ANALYSIS (FACEBOOK, TWITTER AND LINKEDIN) OF CLIENT'S REQUIREMENT

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Abstract-**The sentiment organisation is one of the new trials emerged with the advance of social networks. Our approach to determine the idealistic direction of a Facebook comment (positive or negative) by using the linguistic approach. In most of the sentiment analysis requests using this method, the sentiment lexicon plays a key role. Thus, it is very significant to create a lexicon casing several sentiment words. For this reason, we address in this paper the problem how to collection and list words present in the quantity into two dictionaries. We proposed a new automatic technique to create the positive and negative dictionaries that deeds the emotions symbols (emoticons, acronyms and exclamation words) present in comments. More importantly, our idea allows enlarging these dictionaries with an enrichment step. Finally, by using these prepared vocabularies, we forecast the positive and negative polarities of the comment.**

Keywords-**Sentimental Analysis, Classification Approach, lexicon, emoticons, acronyms and exclamation words**

I. INTRODUCTION

Sentiment is [1] a view, feeling, opinion or assessment of [2] a person for some product, event or service .Sentiment Analysis or Opinion Mining is a stimulating Text Mining and Natural Language Processing problem for automatic extraction, organization and summarization of opinions and emotions expressed in online text .Sentiment analysis is replacing traditional and web based reviews conducted by businesses for finding public opinion about objects like products & facilities. Sentiment Inquiry also assists entities and organizations interested in knowing what other people comment about a specific product, service topic, issue and event to find an optimal choice for which they are looking for.

Sentiment examination is of great value for business aptitude applications [3], where business analysts can analyses public sentiments about products, services, and policies. Sentiment Analysis in the context of Government Intelligence aims at removing public views on government strategies and decisions to infer possible public reaction on implementation of certain policies. Major Steps in Sentiment Examination

• Text Removal – This step involves extracting words from text that influence [5] the outcome of the result.

• Text Refinement – This step involves refining text in form of relevant phrases, words etc.

• Text Organization – This step includes organization of text into its class (positive/destructive)

• Score Combination – This step assembles total slashes from classifier and then aggregates it further to produce the total sentiment score [6].

II. TYPES OF SENTIMENT ANALYSIS

Firstly we need to understand the methods that communal media dealers use to determine sentimentality. As I mention above, there are many types of sentiment analysis. However, for the resolutions of this article we will distillate on three:

A. Manual Processing

Human interpretation of sentiment is definitely the most mature and correct judge of sentiment. Though, it still isn't 100% accurate. Very few retailers still use this procedure without the other use of a tool. This is due to the prolific growth of social media. Allowing to Seth Grimes, communal is the fastest growing source of enterprise analytical data [4].

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B. Keyword Processing

Keyword dispensation algorithms allocate a degree of positivity or negativity to an distinct word, then it gives and overall proportion score to the support. For example, progressive words, great, like, love or negative words: terrible, dislike. The recompenses of this technique are that it is very fast, foreseeable and cheap to implement and run.

C. Natural Language Processing

(NLP also called: script analytics, data mining, computational linguistics) NLP refers to computer systems that procedure human language in standings of its denotation. NLP understands that several words make a phrase, several phrases create a sentence &, ultimately, verdicts convey ideas. NLP works by analyzing language for its meaning. NLP systems are used for in a amount of areas such as changing speech to text, language translation and grammar checks [20].

III. RELATED WORK

Shoushan Li et.,al(2013) [6] significant phenomenon, called polarity unstable, remains unsettled in the bag-of-words replica which sometimes makes the machine learning approach fails. In this study, they aim to do sentiment classification with full thought of the polarity shifting phenomenon. First, they extract some discovery rules for detecting division uneven of sentimental words from a quantity which consists of polarity-shifted stretches.**Eric Linet et.,al(2013)[7]** classification of consumable media by mining pertinent text for their finding features is a slanted process. Previous attempts to do this type of feature mining have generally been limited in range due to having incomplete access to user data. A lot of these studies castoff human domain information to evaluate the inaccuracy of skin extract using these methods. In this paper, we pit book appraisal text to identify nontrivial structures of a set of alike books. We make comparisons flanked by books by observing for books that share appearances, ultimately performing clustering on the books in our information set. **Keisuke Mizumoto et.,al(2012) [8]** first make a small polarity dictionary, which a word polarity is strong-minded actually, and using many store market news, which polarities are not known, new words were added in the polarity lexicon. In this paper they proposed a mechanically dictionary construction approach and sentiment analysis of store marketplace news using the vocabulary. To talk about our proposed method we compare polarities determined by a financial specialist with polarities determined with our future method. **Samir Rustamov et.,al(2013)[9]** fused the two approaches was more accurate that both alone. This technique has been modified to take out sentiment from the "Rotten Tomatoes" movie review folder. The conveyed systems include HMM only, ANFIS only, and a cross of the two. The two single-part systems each perform 82-83% correct results from unedited reviews. The hybrid scheme is able to improve correctness by a full percentage point, achieving 84% correct. It is anticipated that when a routine editing module is inserted, correctness will improve to a level commensurate with human judgment**. Samatcha Thanangthanakij et.,al(2012) [10]** important sources for service providers to get better their service release and service consumers to obtain information for decision making before their service gaining. However, in the real situation, there are more than a few points of view in service assessment using online review. This paper shows an experiential study to apply classification-based sentiment analysis on online reviews with manifold dimensions using natural language dispensation techniques. The aim of this study is to discover the most powerful part-of-speech on the sentimental psychoanalysis and the presentation of the multi-dimensional categorization methods. By the experiment on reviews of restaurant with five size; i.e., taste, environment, service, price, and cleanness, we discover out that adjective (JJ) has the most powerful part-of-speech on the sentimental analysis and BRplus is the most well-organized one with the categorization accuracy of 85.89%.

IV. APPLICATIONS OF SENTIMENTAL ANALYSIS

When consumers have to make a decision or a choice regarding a product, an important info is the standing of that creation, which is derived from the opinion of others. Sentiment analysis can reveal what other people think about a product. The first application of sentiment analysis is thus giving indication & commendation in the choice of products permitting to the wisdom of the crowd. When you choose a product,[8] you are generally attracted to certain specific aspects of the product. A single global rating could be deceiving. Sentiment examination can regroup the sentiments of the reviewers & estimate ratings on certain aspects of the product. Another utility of sentimentality analysis is for corporations that want to distinguish the opinion of customers on their products. They can then progress the aspects that the clienteles found indecisive. Sentiment analysis can also determine which aspects are more significant for the consumers. Finally, sentiment exploration has been proposed as a component of

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other technologies. An idea is to develop information removal in text analysis by excluding the most subjective section of a document or to automatically suggest internet ads for products that fit the viewer's opinion (and removing the others). Knowing what persons think gives numerous potentials in the Human/Mechanism interface domain. Sentiment analysis for determining the opinion of a customer on a product (and consequently the reputation of the product) is the main focus of this paper. In the succeeding section, we will deliberate solutions that allow determining the expressed opinion on products. [9]

V. EXISTING PROBLEMS

Assume a message, categorize whether the communication is of positive, negative, or neutral sentiment. For messages transmission both a positive and negative sentiment, either is the stronger sentimentality should be selected. Today, knowledgeable by the thoughts and exhibitions at the recent Sentiment Analysis Symposium, let's observe the business case for sentiment analysis, as well as some problems related to the detection and analysis processes applied to those forms to mine actionable information for businesses.

[11]In this segment, they discover the problem declarations related to Sentiment analysis. They start with problem of very basic environment and finished with some unsolved problems.

VI. FEATURE EXTRACTION IN SENTIMENTAL ANALYSIS

Text Analysis is a main application field for mechanism learning processes. However the raw information, an order of symbols cannot be fed straight to the algorithms themselves as maximum of them expect arithmetical feature paths with a fixed size somewhat than the raw text forms with variable length [12]. In imperative to address this, sickie-learn offers utilities for the most mutual ways to extract numerical structures from text content, namely:

- Tokenizing strings and giving an integer id for each [10] imaginable token, for example by using white-spaces & punctuation as symbolic separators.
- Counting the existences of tokens in each document.
- Regulating and weighting with diminishing importance tokens that occur in the majority of samples / forms.

In this arrangement, topographies and samples are defined as follows:

- Each individual token incidence frequency (regularized or not) is preserved as a feature.
- The direction of totally the token frequencies for a given article is considered a multivariate sample.

A quantity of documents can thus be signified by a matrix with one row per manuscript and one support per token (e.g. word) occurring in the corpus.

VII. EXISTING APPROACH

Support vector machines were proposed by Boser et al. in [13]. SVM is supervised machine learning approach specifically designed for pattern matching. SVMs construct a set of hyper-planes that separates the data points into two classes with maximal margin in high dimensional feature space. Mathematically, SVM learns a mapping $\chi \rightarrow \Upsilon$ where $x \in \chi$ represents the feature vector & $y \in \Upsilon$ represents scene category. The objective is to learn a function defined below, with function parameter α, given a set of training images (x1, y1), (x2, y2)…(xn,yn).

$y=f(x,\alpha)$

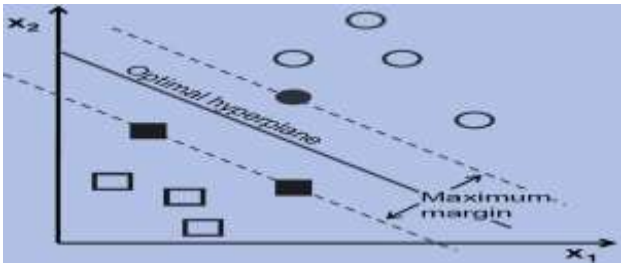


Fig.1. SVM

Once the mapping function is learnt, the classifier can render a category label for unobserved feature vector.[14] According to the linear reparability of data-points, SVM can be linear or non-linear. Non-linear SVM is an extension of linear SVM. It maps the non-linearly separable points to higher dimensional plane in which these can be linearly separable. Linear SVM- In case of non-linear SVM, the hyper plane is defined as given below

$x_i.w+b \geq +1$, if $y_i=+1$

$x_i .w+b \leq +1$, if $y_i= -1$



where $x_i$denotes observed data points, w is normal vector, b is offset of hyper plane w.r.t. to origin & $y_i$is target value.

Supports vectors are those data points that lie exactly on hyper plane & satisfy following equations:

x_i .w+b= +1

x_i .w+b= -1

This linear SVM is used for binary classification. For multiclass classification multiple one-vs-all linear SVMs can be used [15].

VIII. CONCLUSION

In this paper, we presented another method for the sentiment classification. Thus, we proposed a new technique for constructing sentiment lexicons by using the emoticons as a pointer of the sentiment polarity. In fact, we used the comments covering emoticons in order to cluster the words in two dictionaries. Thereafter, these words will be enriched by using other comments. Next, we determined the positive and negative polarities of comments by relying on the words present-day in these dictionaries. Finally, we conversed the experimental results. In future work, we will find a direction picture of words and sentences that can faithfully decipher their sentimental orientation. This representation allows exploiting the classification methods (supervised, unsupervised, and semi-supervised). Indeed, we seek to touch the arithmetical method in order to construct a sentiment lexicon served for the sentiment classification

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