A Survey:
Stress Detection Techniques

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ABSTRACT

Recently, human stress is rapidly increasing. The school-college students, job professionals, and many people those work under pressure. In last few decades, research is going on how to predict people under pressure or feeling relax with his/her duty. In survey it is evaluated, sentiment analysis will work to find emotions or feelings about their daily life. By analyzing social media network like Facebook, Twitter, and other networking sites where user can share personal feelings like happy, angry, stressed, relaxed, or any other emotion to express human life events or views regarding any topic. On social networking sites, a huge number of informal messages are posted every day, also blogs or discussion forums are also available. Emotions appear to be frequently vital in these texts for expressing friendship, and the presentation of social support as a part of opinions or view. In this article, a survey is done on existing techniques which are working to find sentiment analysis of textual data. In the textual data, the positive and negative sentences have to be found to check the emotions of the user. The survey also finds the natural language processing, the lexical parser, sentiment analysis, the classifier algorithm and some different kinds of Twitter datasets. It is found that 85% work completed on sentiment analysis and categorized the sentences as positive or negative.

KEYWORDS

Data mining, Natural Language Processing, Sentiment Analysis, Stress Detection, TensiStrength

INTRODUCTION

Stress is a sentiment of emotional or physical nervousness. It can appear from any occasion or thoughts because of frustrated, angry, or nervous life event. Stress is your body's feedback to a challenge or command. In short rupture, stress can be positive, such as when it helps to avoid hazards or to achieve the target. The stress level is high if a person is not getting any kind of satisfaction with his family members or friends or even not satisfactory with works or situations. It's like different type of works, situations, irritating friends, or partners. In global survey of corporates its published that the 6 out of 10 workers are under pressure on duty. The workers may include high professionals, marketing persons or any person who works with deadline time criteria.

So, it is very important to make survey on how to predict human stress levels. Simply, if a search is done on google with "stress" keyword then 1000 links are there to know how to control your stress, then what to Do and don't. There are some links to guide exercise and diet plan also. But there is no any other system which can observe or works on daily life and decides stress level. A number of different approaches have been utilized, including analyses of morbidity and mortality by occupational categories. Thus, for example, teachers-professors have mortality rates of arteriosclerotic heart disease

that are only about one half of the rates for physicians-lawyers-pharmacists-insurance agents. These are jobs of roughly comparable social status, level of physical activity, and physical health hazards, and it is not unreasonable point to work demands as per possible clues. Within a single occupational group, physicians. There are different specialties to suggest and implicate stressful or demanding work settings; for example, general practitioners show higher rates of mortality and morbidity than specialists. And in a specific organizational setting, such as NASA, prevalence of heart disease was observed to be higher for managers than for scientists and engineers (Kasl, 1984).

In survey only 10% people do regular checkup and maintain body by exercise, diet plan and yoga. But remaining people are not going to hospital. Hospital (Kasl, 1984) is best solution for checking and predicting stress level and what to take action on this. but it takes more expensive to regular checkup. Common people are not able to go hospital for regular checkup.

Gradually, People are diverting to make use of social media stand, like Twitter and Facebook, to share their feelings and opinions with their acquaintances. Postings on these sites are made in naturalistic surroundings and in the itinerary of daily actions and goings-on. As such, social media supply a means for incarcerate behavioral characteristic that are relevant to an individual's thoughts, mood, message, activities, and socialization. The feeling and language used in social media postings may indicate feelings of insignificance, responsibility, defenselessness, and self-hatred that characterize major depression. Additionally, depression suffers often from social situations and activities. Such changes in movement might be silent with changes in communication on social media.

So, have to implement unique concept with a common solution. where analysis of user on daily life in specific format is considered. So, there is very important to make survey on existing system which can help to find human stress of daily life.

BACKGROUND AND RELATED WORK

1. **Data Mining:** Data mining is concept where have to mine the data by different categories or pattern format. Users have different raw dataset which contains all types of data related to the system. User can apply suitable kinds of algorithm like prediction based, analysis based, recommendation algorithm and techniques as well as find the similarity (Bakerti & McCallumlt, n.d.) of words of datasets. In sentiment analysis there is large number of textual datasets are available which contain the train and test dataset. The trained datasets means a sorted dataset where compare the test dataset.

2. **Natural Language Processing:** NLP is a technique to find sentiment analysis on textual data. On every textual dataset NLP technique can be applied it checks grammar, spelling mistake etc. NLP contains the lexical parser (Miller, Beckwith, and Fellbaum, 2016) classifier is best for analysis of textual data. Lexical semantics start with the identification of a word with conventional association between a lexicalized idea and statement that plays a syntactic role. A lexical matrix consequently stands for theoretical purposes by a mapping between written words and Syntax. Since English is wealthy in synonyms, synsets are often enough for differential purposes. Synonymy is, a lexical relation between word forms, but because it is assigned this central role in WordNet, a notational difference is made between words related by synonymy, which are with this in curly group, '{' and '}', and other lexical relations, which will be enclosed in square brackets, '[' and ']'. Semantic relations are pointed by pointers (Pall and Saha, 2015). a supervised learning method for word sense disambiguation based on Inner Product of Vectors (Chen, Liu, and Sun, 2014). The lexical move toward start with an existing set of terms with known sentiment orientation and then use an algorithm to predict the sentiment of a text based upon the incidence of these words (Thelwall, Buckley, and Paltglou, 2012).

3. **Sentiment Detection:** The sentiment analysis can done by using the data mining and NLP techniques. Basically, to find out the emotions of words. Like strength of the word (Thelwall, Buckley, and Paltglou, 2010) (Thelwall, Buckley, and Paltglou, 2012). Sentences are processed with NLP processor to check the grammar and spelling mistake of the sentence and also remove

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