An Analysis of Detecting and Finding Solution to Stress through Social media

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Abstract: The topic lime lights the mental pressure which undermining an individuals' wellbeing. With the notoriety of web based social networking, individuals are accustomed to share their exercises for stretch identification. The paper discusses the identification of client's push state and their companions in online networking. The write-up connotes the utilization of hybrid model-a factor graph consolidated with convolution neural network and social communication data. The test demonstrates that the proposed model can enhance the identification execution by 6-9 percent in F1-score. Further the discussion focuses stress relief techniques through e-mail to minimize the victim's pressure and also provide permanent bliss

Index Terms: Factor graph model, F1 score, Convolution Neural Network, Stress.

I. INTRODUCTION

In this scenario, people are stressed due to various reasons. Starting from Vedic period unto now it is being an unsolved problem in this universe. The attempts of many researchers meet either failure or abrupt end. In this Fast pacing world, stress varies from young unto old. For example, during childhood days, Children are entrenched into five to seven hours inside the school premise. Various subjects' knowledge rushed into their brain hour after hour along with discipline. Thus the tight schedule as well as their competition with the rest of the students makes their brain weary. After returning home, they are taking stress in the form of homework and other duties which burst out as cries and sobs. On meeting this adamant quality of their children, parents started bullying them because they are also indulged in stress due to their hard days of work. On the other hand, parents in the working environment find it difficult to co-op with their boss Already they have brought with them stress-filled mind to the office or institution due to boundless family pressure if they are in the joined family, also heavy traffic ,food style, way of dressing and transportation. They don't have time to filter their stress either by chatting with friends or by contacting their family members. The only way they ought to indulge is social media. It is said to be the best possible way to filter all their problems entitled stress and strain. These days Mental Stress is transforming into a risk to People's prosperity. With the quick pace of life, more individuals are feeling pushed. As shown by a general survey declared by New Business in 2010, 1 over a bit of the masses has experienced an obvious climb in stress throughout the latest two years. Regardless of the way that

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weight itself is non-clinical and essential in our life, over the top and never-ending weight can be genuinely pernicious to person's physical and enthusiastic health. According to existing examination works, whole deal push has been seen to be related to various ailments, e.g., clinical depressions, lack of sleep, etc. Also, as shown by Chinese Center for Disease Control and Avoidance, suicide has transformed into the best purpose behind death among Chinese youth, and over the top weight is believed to be a main issue of suicide. All these reveal the snappy addition of stress has transformed into a mind blowing test for human prosperity and life quality. Along these lines, there is noteworthiness in perceiving weight before it changes into significant issues. Standard mental weight disclosure is prevalently in perspective on eye to eye interviews, self-report surveys or wearable sensors. Nevertheless, ordinary procedures are actually responsive, which are ordinarily, time-costing and hysteretic.The Rise of Social Media is Changing People's Life, and in addition Research in Healthcare and Wellness. With the advancement of informal organizations like Twitter, Sina Weibo.2 an ever-increasing number of individuals are ready to share their day by day occasions and states of mind, and co-operate with companions through the informal communities. As these online long range interpersonal communication data reflects customers' certifiable states and sentiments in a hurry, it offers new open entryways for addressing, evaluating, showing, mining customers lead structures through the extensive scale relational associations, and such social information can find its theoretical reason in cerebrum science. For instance, [2] found that focused on clients are more liable to be socially not so much dynamic, but rather more as of late, there have been looking into endeavors on outfitting social media information for creating mental and physical medicinal service devices. For instance, [6] proposed to use Twitter information for a constant ailment reconnaissance; while [11] attempted to connect the vocabulary holes between wellbeing searchers and suppliers utilizing the group produced wellbeing information. There are some examination works [4], to distinguish clients' mental pressure. Existing works illustrated that use web-based social networking for human services and in specific pressure discovery is doable. We propose a bound together crossover show incorporating CNN with FGM to use both tweet content qualities. Furthermore, there is social connection to improve pressure detection. We fabricate a few focused on twitter-posting datasets by diverse ground-truth naming techniques from several prevalent online networking platforms and completely assess our proposed technique on numerous viewpoints. We do a top to bottom examinations on a true large-scale dataset and pick up bits of knowledge on connections between social connections and worry, and

also social structures focused on clients .Currently, there is no algorithm or any concepts with good accuracy to detect the stress in social media. This stress may influence and affect their personal life. If a person is in stress, it is expressed in their comments or shares in his/her social media page. Through this we can detect the stress manually but is not automated in range or percentage basis to show how much they are in stress.   In this proposed system, we a tweet page, where the users can share their tweet and comment on others tweet like a social media page. Through the words in the context they have shared, the context is analyzed through data mining concept and classified as a positive or negative comment. This percentage/ range can be automatically calculated through this tool. In addition, a feature is added where admin can view the user's stress percentage level and selectively will send motivational messages and their stress level percentage through mail to be aware of their stress level. E-mail sent also consists of stress relief techniques based on stress percent.

II. RELATED WORK

Yuan Zhang, Jie Tang, Jimeng Sun, Yiran Chen, and Jinghai Rao have presented think about a novel issue of feeling forecast in interpersonal organizations. A strategy alluded to as Mood cast for displaying and foreseeing feeling elements in the interpersonal organization. The proposed approach can viably show every client's feeling status and the expectation execution is superior to a few pattern strategies for expected feelings. For display learning, it utilizes a Metropolis-Hastings calculation to acquire a surmised arrangement. The test comes about on two distinctive genuine informal communities show that the proposed approach can adequately show every client's feeling status and the forecast execution is superior to a few pattern strategies for feeling forecast. The Goal of this paper was to look at the modified affirmation of people's each day stress from three unique arrangements of data: a) people activity, as distinguished through their mobile phones (data identifying with transient properties of individuals); b) atmosphere conditions (data identifying with transient properties of the earth); and c) personality attributes (data concerning enduring behavior of individuals). The issue was exhibited as a 2-way characterize activity one. The results convincingly suggest that all the three 484 sorts of data are vital for accomplishing a sensible farsighted control.Liqiang Nie, Yi-Liang Zhao, Mohammad Akbari, Jialie Shen, and Tat-Seng Chua, have presented about Bridging the vocabulary hole between wellbeing searchers and medicinal services information with a worldwide learning approach. A restorative wording task plan is to connect the vocabulary hole between wellbeing searchers and social insurance learning. The plan involves two segments, neighborhood mining, and worldwide learning. Extensive assessments on a certifiable dataset exhibit that our plan can create promising execution when contrasted with the predominant coding techniques. Creator will examine how to adapt ably compose the unstructured therapeutic substance into client needs-mindful cosmology by utilizing the prescribed medicinal phrasings.D. Kamvar has presented an examination about when an individual feel fine and looking through the enthusiastic web. On the utilization of We Feel Fine to recommend a class of perceptions called Experiential Data Visualization, which center around immersive thing level

collaboration with data. Rehashed data in pertinent answers requires the client to peruse through countless replies keeping in mind the end goal to really acquire information. To date, most research in appraisal examination has been locked in on figuring to remove, arrange, and gather conclusion. While this has clearly been significant, there remains a far-reaching open entryway for experts to create immersive interfaces that consider thing level examination of incline data. This thing level examination of data can convey its own particular experiential favorable circumstances to the customer, what's more, moreover engage swarm sourced subjective data examination.Dan C Ciresan, Ueli Meier, Jonathan Masci, Luca Maria Gambardella, furgen Schmidh uber have presented a new profound CNN design, Max Min-CNN, to better encode both positive and negative channel recognitions in the net. We propose to alter the standard convolution square of CNN remembering the ultimate objective to trade more information layer after layer while keeping some invariance inside the system. Our central idea is to mishandle both positive and negative high scores got in the convolution maps. This lead is gained by modifying the standard authorization work wander before pooling1.The time required for this is more. It is a tedious process.

III. DEVELOPMENT OF EMAIL NOTIFICATION AND STRESS RELIEF TECHNIQUES

Tests were conducted based on diversity of users as shown in the fig.1. Many researchers have incorporated their ideas and imaginations in the public media.   But it could not reach the public sufficiently. Readers or listeners find it inconvenient to follow the solutions given by the pioneers in this field of stress detection.
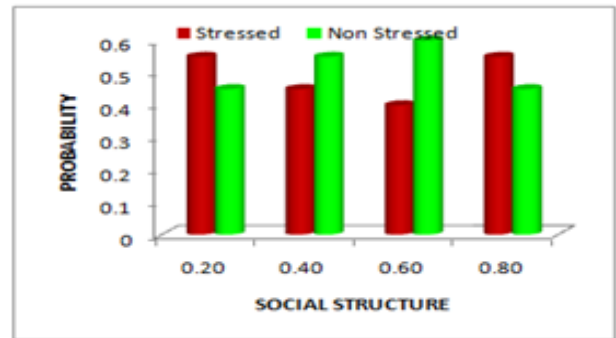

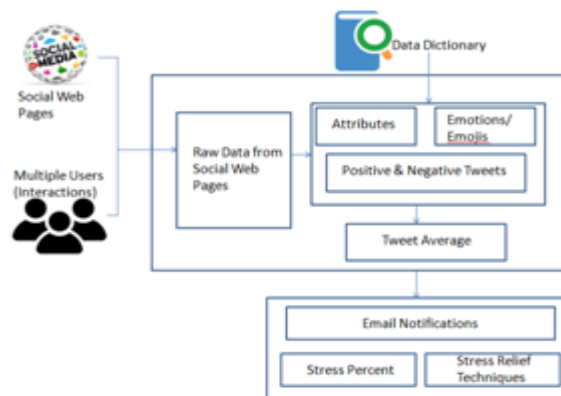Fig 1 Results of sampling

Architectu

Fig 2. Architecture of Email Notification Analysis

As shown in fig.2, the discussion highlighted social media with special reference to twitter. In this, multiple personalities have registered their diverse ideas which resulted in the powerful over flow of multiplicity. For instance, a commoner who expressed his/her views may kindle the society. Professionalists may stress his ideas to curtail the formers' expression. In connection to this a third party will thrust his ideas. In order to solve this, Administrator must take interest in all these by interacting with them. By facilitating these persons, he has created a data which could be categorized into Tweet level, Emoticons, Linguistic level and Mood.

Step 1

In the initial stage, the administrator must contact one after the other randomly to get their problems in hand. Then it must be analyzed and the ideas should be sorted out in such a way to give a concrete solution to how to get rid of stress and strain

Step 2

In the second stage, they must be allowed to pour out their emotions such as dejection, frustration, confusion and subjection without giving any distractions. While listening, their using up of words must be recorded. It will help the administrator to find out in which stage they are.

Step 3

The third category clears out what is their intention of contacting people through social media. Their life time experience of their feelings may maximize or minimize their stress level.

Step 4

In the final stage, the administrator could easily find the mood of the victim either by contacting through verbally or in writing. The cited four categories are possible only through Convolution Neural Network. After carefully scrutinizing the mental attitude of people who have crossed all the four stages, the administrator must try to segregate people's positivity and negativity through Decision Tree algorithm. It shows the Tweet average i.e. Stressed and non-stressed categories. As per the notification shown in the e-mail he has to calculate the stress percentage and also to find a remedy for it. The researcher has to contact peoples from various fields to know their position and their mental condition. He has to plan in such a way as what, where and when those people are affected and how and why they must be relieved from their mute or disturbed states. The below stated figure indicates the level of stress and their counter measures. Tests were conducted based on users percentage of stress.

Table.1.Stress relief Technique for Each stress levels

Level of stress	Description	Relief Technique	Remarks
0-10%	Healthy State- Having higher percent of reasoning ability. They are very healthy in their daily routine. It is Scientifically proven	-	Refined
11-30%	Normal State - having day to day stress. They are under normalcy	Prior preparation, wholesome diet	Refined
31-50%	Average state- may lead to depression, anxiety and brooding over one thing	Yoga, Aromatherapy, recalling past success	Unrefined
51-75%	High level of stress - Sleepless nights, Inattentive, Short temperament	Getting Advised from Psychiatrist as early as possible	Unrefined
75 & Above	Oscillation between life & death. It is fatal. It is hypothetically yet to be proved.	Severe Medical care is essential	Unrefined

A survey was conducted for 100 people and each user was monitored closely. The Pictographical representation as shown in the Fig.3 gives the details of maximum and minimum stressed status of the people.
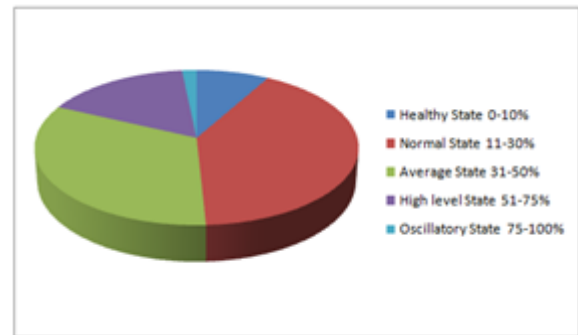
Fig.3 Survey results for stress levels of different users

Table 2   Summary of the process for Developing E-mail   notification analysis.

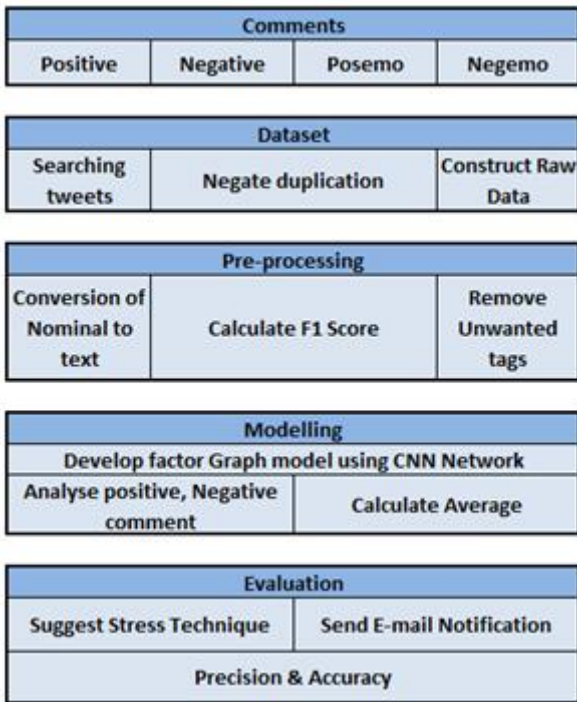| Process	Output
Prepare Scale of Stress levels	Percent of scale levels
Fetch Dataset	Group of tweets
Organize	Refined Data
Develop factor Graph model Via CNN Network	Factor Graph - CNN Network
Validation (Average tweet percent)	Validation

Fig 3 Life cycle of Proposed Email notification Analysis model

RESULT

The results are acquired by developing factor graph model using CNN network. Precision and accuracy were used to detect the performance of Email notification and stress technique analysis. Positive and negative comments are considered as main notations. Finally based upon stress levels, stress techniques are suggested to the victims.

$$Precision = PT/(PT+PF) \qquad (1)$$
$$Accuracy = PT+NT/(PT+NT+PF+NF) \qquad (2)$$

Where:

PT = Positive True

PF = Positive False

NT = Negative True

NF = Negative False

Table 3 Precision categorization for prediction coherence

Prediction	Precision %
Negative	64.77
Neutral	48.14
Positive	69.88

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IV. CONCLUSION

To put in a nutshell, Stress is a monster whose clutches is very strong. One finds it very difficult to free himself from its strong grip. Researchers' attempts in order to free many from the prison of stress may bring revolution in the field of Stress Management.

In this framework, we showed interest in recognizing clients 'mental pressure states from customers' week after week web based systems administration data, using tweets' substance and furthermore customers' social affiliations. Using genuine web based systems administration data as the start, we considered the association between customer mental nervousness states and their social correspondence rehearses. To totally utilize both substance and social correspondence information of customers' tweets, we proposed a half model which joins the factor graph model (FGM) with a convolution neural framework (CNN).In the ancient, our ancestors retired to the hermit to find a solace to their stressed mind- In the middle age our forefathers' seek the help of psychiatrist to get relief from their mental strain. Now in this fast world people are after social media to lead a practical life in order to attain sanity.

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