

PREDICTING ONLINE GAME DISORDER CAUSED IN YOUNGSTERS

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Abstract- The rates of diagnosing depression and mental illness during the last few decades, a number of cases prevail unheard-of. Symptoms linked to mental illness are detectable on Twitter, Facebook and web forums and automatic methods are more and more able to locate inactivity and other mental disease. In this project, latest studies that planned to detect depression and mental illness by the use of social media are surveyed. Mentally ill users have already been pointed out the use of screening surveys, their community distribution of analysis on twitter, or by their membership in online forums, and that they were detectable originating at regulate users be patterns in their language and online activity. Various automated detection methods can help to detect depressed people using social media. In addition, a number of authors experience that various Social Networking Sites activities may be linked to low self-confidence, particularly in young people and adolescents. In our project the mental disorder is predicted by algorithms namely K-Means Nearest Neighbor (KNN) and Deep Belief Network (DBN). We can prove that DBN works better than other algorithms in terms of accuracy.

Keywords: -. Deep Belief Network (DBN, restricted Boltzmann machines, KNN algorithms.

INTRODUCTION

Reports that approx. 5 crore people suffer from Depression. The WHO report estimates that about 322 million people are suffered from depression over worldwide and nearly half of the populations are lived in South East Asian and Western Pacific Region. The total number of people that are living with depression are estimated increase by 18.4% between 2015-2019. WHO report in September 2019 suggests that 75% suicides are committed in low and middle income countries. Lancet report in 2019 reports that India has the highest suicide rates in youth, age between 15-29. National Crime Records Bureau reports in 2013, 2471 students commit suicide because of failure in examination. Depression is a leading cause of disability worldwide. Globally, an estimated 350 million people of all ages suffer from depression. Depressed people have various depression symptoms manifested by distinguishing behaviors. In clinical diagnosis, psychological doctors often make face-to-face interviews referring to the commonly used Diagnostic and Statistical Manual of Mental Disorders criteria. Nine classes of depression symptoms are defined in the criteria, describing the distinguishing behaviors on daily lives.

LITERATURE SURVEY

Sharing Information Promoting Unhealthy Behavior through Social Media: Examination of the Users and the Content Using the Case of Pro-Anorexia in Tumblr Margaret McLaughlin ; Mina Park ; Yao Sun

By focusing on online discourse around pro-anorexia content on Tumblr (the promotion of behaviors related to the eating disorder based on a lifestyle view that being extremely thin is beautiful), this study aims to look at how information about the pro-anorexia perspective is circulated among social media users and the way in which such users can be characterized. Specifically, we plan to analyze the content and examine the shared characteristics of the users who are exposed to similar social media content and have a desire to share it.

Subconscious Crowdsourcing: A feasible data collection mechanism for mental disorder detection on social media Chun-Hao Chang ; Elvis Saravia ; Yi-Shin Chen

In this paper, we aim at building predictive models that leverage language and behavioral patterns, used particularly in social media, to determine whether a user is suffering from two cases of mental disorder. These predictive models are made possible by employing a novel data collection process, coined as Subconscious Crowdsourcing, which helps to collect a faster and more reliable dataset of patients. Our experiments suggest that extracting specific language patterns and social interaction features from reliable patient datasets can greatly contribute to further analysis and detection of mental disorders.

A hybrid statistical and semantic model for identification of mental health and behavioral disorders using social network analysis Madan Krishnamurthy ; Khalid Mahmood ; Pawel Marcinek

We present a novel approach where personality traits inferred from unstructured text of patients and general social users are compared via statistical analysis. This is achieved by our Psychiatric Disorder Determination (PDD) algorithm. Further, Social media data of users showing personality traits of patients is subjected to semantic based text classification using Natural Language Processing (NLP) and Ontology Based Information Extraction (OBIE) in our Addiction Category Determination (ACD) algorithm. This provides categorization of user journals to common topics of discussion by referring to ontologies DBpedia, Freebase and YAGO2s. The final category hence obtained can be predicted to be a trending subject of concern for users with Psychiatric disorders developing Addictive behavioral personalities.

MIDAS: Mental illness detection and analysis via social media Elvis Saravia ; Chun-Hao Chang ; Renaud Jollet De Lorenzo ; Yi-Shin Chen

In this paper, we propose a novel data collection mechanism and build predictive models that leverage language and behavioral patterns, used particularly on Twitter, to determine whether a user is suffering from a mental disorder. After training the predictive models, they are further pre-trained to serve as the backend for our demonstration, MIDAS. MIDAS offers an analytics web-service to explore several characteristics pertaining to user's linguistic and behavioral patterns on social media, with respect to mental illnesses.

EXISTING SYSTEM

- **K-Means Nearest Neighbor**
- In data mining, the important features can be extracted only when the details of the dataset are properly classified.
- Classification of an image is very important to extract the fine details for further processing.
- Many researchers were concentrated on identifying the best classification algorithm in the recent years, active learning algorithm were used to find the best classifier in hyper spectral images and this work identifies that KNN algorithms were tested in the hyper spectral images .
- K-nearest neighborhood algorithm used vastly in the classification of images.
- An improved KNN for high resolution remote sensing is used and it permits to combine the locality using the maximum margin classification
- KNN is used with artificial immune B-cell network is used and it proves that reduction of data for processing. Later K-nn is used with maximal margin principle and is proved with the satisfactory results.

DISADVANTGES OF EXISTING SYSTEM

- Cannot be implemented in all datasets.
- Less Accuracy in predicting the stress level.
- More time consuming process .
- Complex model.

PROPOSED SYSTEM

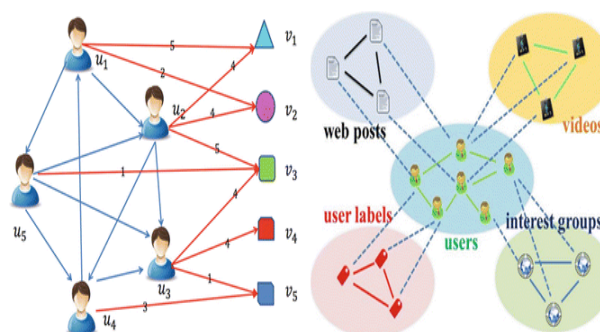
Deep Belief Network (DBN) :

- In machine learning, a deep belief network (DBN) is a generative graphical model, alternatively. class of deep neural network, composed of multiple layers of latent variables ("hidden units"), with connections between the layers but not between units within each layer.
- When trained on a set of examples without supervision, a DBN can learn to probabilistically reconstruct its inputs. The layers then act as feature detectors.
- After this learning step, a DBN can be further trained with supervision to perform classification.
- DBNs can be viewed as a composition of simple, unsupervised networks such as restricted Boltzmann machines (RBMs) or autoencoders, where each sub-network's hidden layer serves as the visible layer for the next.

ADVANTAGES OF PROPOSED SYSTEM

- High output efficiency.
- User friendly.
- Less time consumption.
- Accuracy in predicting stress level is good.
- Can be applied to all datasets.

USECASE DIAGRAM



MODULES

1. Data Collection
2. Data Preprocessing
3. Feature Extraction
4. Classification.

1. Data Collection

- To make depression detection via social media, we constructed two datasets of depression and non-depression users on Twitter, which has mature APIs and is prevalent around the world.
- Given a Twitter user, we collected the profile information of the user and an anchor tweet to infer the mental state. As people should be observed for a period of time according to clinical experience, all the other tweets published within one month from the anchor tweet were also obtained.

2. Data Preprocessing

- Before feature extraction, we noticed that the words are flexible and variant in the raw data of social media, which causes great difficulties in word matching and semantic analysis.

3. Feature Extraction

- Number of tweets. We extracted the number of tweets posted historically and recently by the given user to assess the user's activeness
- Social interactions. We considered the social interaction features such as the number of the user's followings and followers to describe users' online social behaviors.

4. Depression Classification

- We use the concept of Support Vector Machine to classify the stress level.

SYSTEM REQUIREMENTS HARDWARE REQUIREMENTS

- Processor : Core i3/i5/i7
- RAM : 2-4GB
- HDD : 500 GB

SOFTWARE REQUIREMENTS

- Platform: Windows Xp/7/8/10
- Coding Language: Python,
- Database : My SQL

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