A NOVEL AI-POWERED SYSTEM QUANTIFIES SUICIDE INDICATORS AND IDENTIFIES SUICIDE-RELATED CONTENT IN ONLINE POSTS

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ABSTRACT:

We Suicidal Tendency or the intension to kill oneself or end one's life is a catastrophic situation which is mostly unknown by any person in the victim's life. Suicide has been an intractable public health problem despite advances in the diagnosis and treatment of major mental disorders. In many studies it is clearly evident that, victims tend to kill themselves either to end their pain or pressure or to have a sense of relief that they are not going to live in this world anymore. This project aims to propose a method that helps the family, friends or the close ones of the victim to immediately detect if the person has already started feeling the sense of depression. The main aim is to find a strong co-relation between components in the subsystem and compare the accuracies to build an alarming system. "Better late than never" the victim can be saved by the proposed method and immediate treatment can be started. Unlike the existing systems, this project aims to detect the suicidal tendencies in multiple aspects instead of focusing on a single perspective.

Index terms:-Suicidal Tendency, catastrophic, Better late than never.

I INTRODUCTION

This project aims to focus on the people who have an intension to kill themselves. In this consequence, multi-faceted method that can detect this tendency and intimate the family, friends or the close ones beforehand can prove to be a boon for the invention. This project tends to consider an electronic device particularly a mobile (as used by most of them) is the key element. This device is used to capture different elements like facial gestures, speech recognition and many more. A trivial concept of incorporating different aspects like: Facial Gestures, Voice Recognition and Messaging Patterns follow the bandwagon along with the technical biproducts of the project. Facial gestures include unhappy expressions like sad, dull, tired; voice patterns include low voices that sound dull are easy to recognize that someone is unhappy; Texting patterns include unusual texting patterns that indicate lack of interest in doing activities.

II EXISTING SYSTEM:

Since suicide is not a decision made up in a single day, many researches had been done in the past on various aspects. While some of them included how suicides occur and others concluded with some methodologies on how to detect suicidal intension. Distinct approaches using Human Computer Interaction, Natural Language Processing and using Convolutional Neural Networks were highly popular. But these systems possessed a drawback that, it was not practically possible

to indicate a clear demarcation in only one aspect of implementation. In course of time, numerous approaches have been proposed with the advancement in the technology which is to perform text mining and sentiment analysis on social media platforms like reddit and twitter.

Disadvantages :

● Can predict outcome only from one aspect.

● The output is not reliable

III PROPOSED SYSTEM

This project aims to propose a system that is capable of detecting suicidal tendency using multiple approaches. Three technologies namely Human Computer Interaction, Natural Language Processing and voice pattern analysis are taken into consideration to perform a detailed execution. Later a correlation matrix is proposed to be implemented that is able to find strong or weak correlations between the above three components.

Advantages :
● Predicts outcomes from multiple aspects.

● Reliable outcome due to correlation matrix.
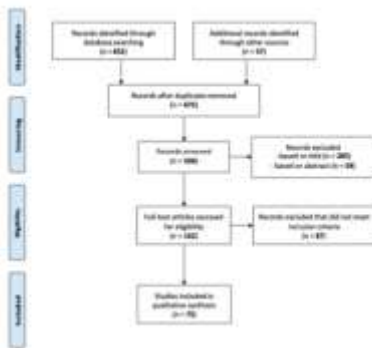
IV SYSTEM ARCHITECTURE:

Fig No:SYSTEM ARCHETECTURE

V CONCLUSION

Deep learning plays a vital role day to day life in hardware, software and various devices. They are used in various applications like virtual personal assistant, traffic predictions, online transportation networks, video surveillance, online fraud detection, refinement of search engine results, product recommendations and social media services.An innovative technique using machine learning is proposed for detecting hanging attempts. After training the system it recognizes the hanging attempts. It captures the actions through a camera, generates an alert message. Using this technique better accuracy and higher sensitivity are obtained on a dataset with substantial variations between different simulated hanging sequences.

VII RESULTS

In above screen we can see all missing data is replaced with 0 and we can see dataset contains total 469 records. In graph we can see total patients with and without suicidal thought. In above graph X-axis represents YES and NO values and y-axis represents total counts of YES and NO patients. YES means patients has suicidal thoughts and NO

means patients has no suicidal thoughts. Now close above graph and then click on 'Machine Translation & Features Extraction' button to translate all dataset NON-NUMERIC features to NUMERIC features.

In above graph x-axis represents algorithm names and y-axis represents accuracy, precision, recall and FSCORE in different colour bars. In above graph we can see CNN is performing well compare to existing Random Forest algorithm.

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