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"Design Of Efficient Questions Answers And Facial Expression For Stress Using Python"

Kuldeep Nikam[1], Mr. S. K. Patil[2], Ms. M. A. Waghmode[3], Abhishek Tawale[4], Kedar Shivanage[5],
[2,3]*Assistant Professor,Dept. of E&TC Engg., SKNCOE,SPPU, Pune.*
[1,4,5]*UG Student,Dept. of E&TC Engg., SKNCOE,SPPU, Pune.*

[1]*kuldeepnikam2782@gmail.com*

[2]*skpatil_skncoe@sinhgad.edu*

[3]*meghali.waghmode_skncoe@sinhgad.edu*

[4]*abhitawale143@gmail.com*

[5]*kedarshivanage47@gmail.com*

Abstract:

Depression can be defined as the body's response to self-regulating changes within the environment through psychological, physical, or emotional responses. Repeated episodes of severe depression can disrupt a person's physical and mental stability. This can later have a negative impact on work performance and over time can increase the risk of physical disorders such as high blood pressure and anxiety disorders such as anxiety. Depression is a growing concern for people around the world within the age group. A reliable, coefficient, high stress detection system can allow its users to better monitor and manage their stress in order to minimize its long-term negative effects. The topic of depression today is very important, not only in research but in the health of society as a whole. People are becoming more and more aware of this problem and its effects at several levels: health, public health, employment, quality of life, etc. This has led to a dramatic increase in device searches and applications for measuring and controlling pressure in reality. time. Recent advances in technology and science are fueling the interest in the development of new methods and techniques. In this project we will develop a Windows operating system using Python editing language to detect pressure using user queries and user image.

Keywords: pressure detection, emotion detection, python, web application, etc.

I. Introduction

Depression is defined as a reaction to adverse environmental conditions that challenge normal adaptability as seen by the individual [1]. Although eustress helps a person to stay focused on coping with stress, severe stress (depression) triggers the activation of the HPA (hypothalamic-pituitary-adrenocortical) axis. Prolonged exposure to the HPA axis can cause physical and psychological disturbances [2]. Depression is also found to affect physical processes and has a detrimental effect on daily functioning and is thought to affect the global economy [3]. Monitoring negative stress levels can provide useful information to identify stressors and provide an opportunity to take the necessary safety measures to prevent the resulting

disruption. Two different effects of negative stress are defined as: (i) physical stress or "intention"; and (ii) pressure or "principal" pressure also known as perceived pressure. Targeted stress is characterized by changes in body movements such as high blood pressure, heart rate, and high cortisol levels. Subjective depression is a condition in which the condition is depressive or not. The most common way to measure perceived stress is to use a list of stress questions such as DASS 21 (Depression Scale, Anxiety and Depression - 21 Items), STAI (State-Trait Anxiety Inventory), and POMS .Two main stress steps Physically include: (i) Cortisol (stress hormones) and (ii) physiological signal values such as GSR (Galvanic Skin Response), ECG (Electrocardiogram), and EEG (Electroencephalogram). In [4], we discussed different levels of stress and technology related to measuring stress metrics. Continuing on [5], we have provided an overview of the various sensors and devices available for sale to measure pressure. . In this project we will develop a Windows operating system using Python editing language to detect pressure using user queries and user image.

II. Related Work

Creating and using a personal information graph to improve the recognition of suicidal ideation at Lei Cao Media; Huijun Zhang; Ling Feng Performance research shows that: 1) with a built-in personal information graph, the detection of suicidal ideas based on social media can reach more than 93% accuracy; and 2) among the six categories of personal items, posts, people, and information are the top 3 main indicators. Under these categories, the text posted, the level of depression, the duration of the depression, the picture posted, have a significant impact on a person's finding suicidal thoughts. Comprehensive Review of Depression Diagnosis G. Shanmugasundaram; S. Yazhini; E. Hemapratha; S. Nithya Published in: 2019 IEEE International Conference on System, Computation, Automation and Networking (ICSCAN) DOI: 10.1109 / ICSCAN.2019.8878795 It also explores important challenges and opportunities in stress management strategies. Smart Sensor for IoMT Rachakonda Depression Test; Prabha Sunaravadivel; Saraju P. Mohanty; Elias Kougianos; Madhavi Ganapathiraju Published: 2018 IEEE International Symposium on Smart Electronic Systems (SES) (FormerIS) DOI: 10.1109 / iSES.2018.00039 In this paper a stress detection novel, the proposed iStress monitors body temperature stress levels. and sweat during physical activity. The implementation of the iStress system uses a neural network approach that uses an anonymous logic controller of the Mamdani type with more than 150 cases as a model. Collected data is sent and stored in the cloud, which can help in real-time detect the level of human stress and thus reduce health risks. This system uses low power although it works in real time. The proposed system has the potential to produce results with 97% accuracy, low system complexity and estimated cost. Integrated Non-Allergy Symptoms Program for Koji Nakagawa Discovery; Hiroaki Kawamoto; Yoshiyuki Sankai Published on: 2018 57th Annual Conference of the Society of Instrument and Control Engineers of Japan (SICE) DOI: 10.23919 / SICE.2018.8492614 and testing the system's ability to detect pressure. We have developed an algorithm for measuring heart rate with high accuracy, based on near-infrared images on a person's cheek, and approximate crying and forehead temperature based on infrared images. In the tests, the system was shown to calculate the heart rate with sufficient accuracy. In addition, we performed a stress

test with four human participants, and confirmed that the proposed integrated system could effectively detect stress, on the basis of a measured heart rate and skin temperature, as recommended for cold water used on the wrist. Finally, the improved system was proven to be a possible way to diagnose depression. Ways to Find Stress in My Elzeiny Work; Marwa Qaraqe Published in: 2018 International Conference on Computer and Applications (ICCA) DOI: 10.1109 / COMAPP.2018.8460293 In this paper, we review the literature available to understand the stress event, and to evaluate stress detection strategies and management strategies. Through this study, we explain to the reader a collection of stress-related problems, such as the importance of identifying the causes of depression and the use of early detection technology to maintain a person's health. Keep Stress Away From SoDA: A Stress Reduction Program And Reduce Ayten Ozge Akmandor; Niraj K. Jha Published in: IEEE Transactions on Multi-Scale Computing Systems (Volume: 3, Issue: 4, Oct.-Dec. 1 2017) In the stress detection phase, SoDA achieves 95.8 percent accuracy combined. . a distinctive feature for the selection of the monitored feature and the reduction of the unattended size. In the stress reduction phase, we compare the SoDA with the `reduction reduction base 'and ensure its effectiveness in responding to and reducing stress.

III. Proposed System

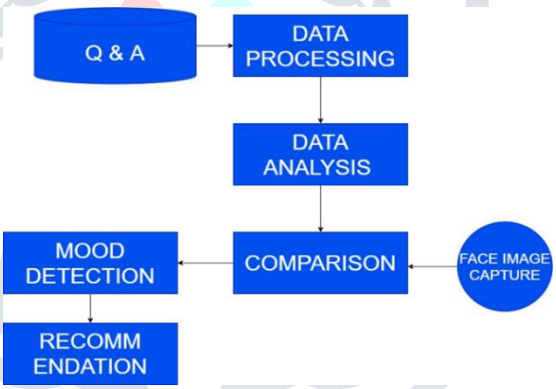

Fig 3.1: Proposed System

The project will be developed as a Windows program using python editing language. Pressure will be obtained using the answer to the question between the system and the user. The effectiveness of the system depends on the information provided by the system ie question and answers. And since we are going to use a portable webcam we have to reduce the accuracy while getting the user's feelings.

Results:

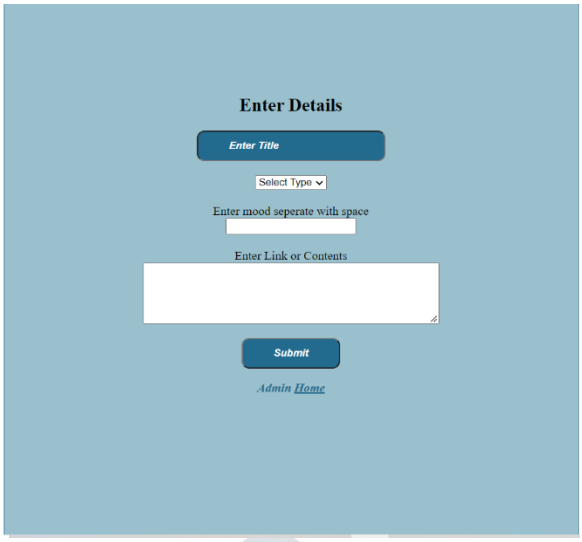

Fig 3.2: Add Data

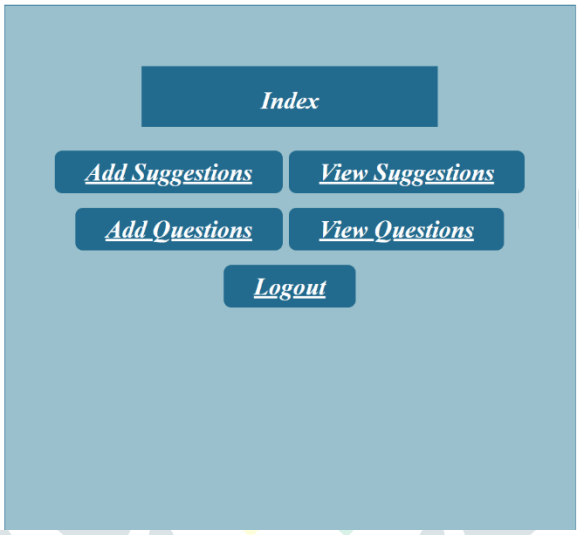

Fig 3.3: Dashboard

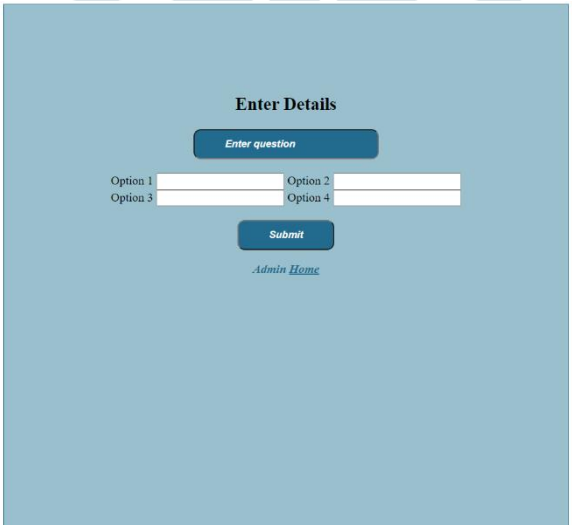

Fig 3.4 : Add Question

IV. Conclusion

So we used a pressure detection system using python editing language. The project will be developed as a window-based program. The facial expressions will be used to identify emotions such as sadness, joy or shock and the questionnaire system will be used to detect stress.

V. References

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