



G. Narayanamma Institute of Technology & Science (For Women) (Autonomous)

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Shaikpet, Hyderabad-500104

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

<GN-R-18> (2022 - 2023) II B.Tech II Sem Hobby Project

on "Stress Detection with wearable technology Detection "

- Smart Band interface for camera activation

Abstract:

Stress is a state of worry or mental tension caused by a difficult situation. According to survey of mental health, around 54.2% students are undergoing stress, depression and anxiety during classes. Stress can be detected by analyzing the facial expressions and the pulse rate of a student. The existing solution for this concern is a system which is triggered by an input signal received from a wristband that is worn by a student to detect the stress levels based on the facial expressions. In this situation, the camera is kept ON all the time which is inefficient and leads to wastage of cloud space.

After analyzing all the physiological parameters, the smart band sends a signal to the Raspberry Pi through the Bluetooth or Wifi module when the stress levels of a person who wore the smart band exceeds the threshold value. The depth sensing camera gets turned ON when it receives the signal from raspberry pi. The system utilizes the appropriate libraries and APIs for the camera and GPIO pins to ensure reliable and accurate performance. This system provides a non-invasive and efficient way to detect stress in students and can help promote mental health and well-being. It can be extended to provide additional features such as real-time monitoring and feedback to help students manage their stress levels.

H/W & S/W Requirements

Depth sensing camera, Raspberry pi, Breadboard, Bluetooth or WIFI module, Smart Band

Python with open CV, Raspberry Pi OS(Raspbian)

Dept R&D: Yes



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