Patent Search

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Abstract:

Our invention “IOT BASED STRESS DETECTOR AND REDUCER” is a device for detecting and controlling the human stress. Wearable devices have recently received considerable interest due to their great promise for a plethora of applications. Increased research efforts are oriented towards a non-invasive monitoring of human health as well as activity parameters. A wide range of wearable sensors are being developed for real-time non-invasive monitoring. This invention provides a comprehensive review of sensors used in wrist-wearable devices, methods used for the visualization of parameters measured as well as methods used for intelligent analysis of data obtained from wrist-wearable devices. These kinds of devices are used to identify human stress level and heart rate level. As a result of this review, the galvanic sensor and heart rate sensors are used to identify human stress level and heart beat level. Using IR LED (9000nm – 12000nm) light allows light energy to penetrate one to three inches into your muscle tissue. Your muscles use the energy to create their own heat, which causes them to relax naturally. There’s no better way to achieve that kind of relaxation. An IOT (internet of things) collects sensors data to display in web page.

Complete Specification

Claims:1. Heartbeat level increases during stress, here we monitor the heartbeat rate using heartbeat sensor. Stress causes sweating to increase on palms and soles. Changes in the rate of sweat it increases the skin resistance. Using GSR sensor we are checking the skin resistance level. When both the sensor values exceeds threshold values stress in the user is detected and sent to Microcontroller (Arduino).
2. Once Microcontroller receives the stress indication it automatically sends the time when it got the indication and how many times stress has been detected to the Internet of things [IoT] server through WIFI module. Those indications will be stored in the online and can be viewed whenever needed. It will be helpful for the user to take medication.
3. Stress Indication is done in the first Microcontroller using sensors and sends wireless signal to the RF Receiver in the second Microcontroller through RF Transmitter. Once the signal is received in second microcontroller, it will switch on the IR LED to reduce the stress level which is attached in the user toe.
4. The Arduino Uno board is a microcontroller based on the ATmega328. It has 14 digital input/output pins in which 6 can be used as PWM outputs, a 16 MHz ceramic resonator, an ICSP header, a USB connection, 6 analog inputs, a power jack and a reset button. This contains all the required support needed for microcontroller.
5. A microcontroller is a compact integrated circuit designed to govern a specific operation in an embedded system. A typical microcontroller includes a processor, memory and input/output peripherals on a single chip and it is an open-source
microcontroller board based on the Microchip ATmega328P microcontroller and developed by Arduino.cc.
6. First Microcontroller collects the information from heart beat sensor, GSR sensor. Then it sends that information to be stored in database in cloud sever via WIFI Module. If any stress is detected by the microcontroller it will send the signal to the RF Receiver via RF Transmitter. Second Microcontroller will turn ON the IR LED as soon as it

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Ministry of Commerce & Industry,
Government of India

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TITLE OF INVENTION	STRESS DETECTOR AND REDUCER WEARABLE DEVICE USING IOT
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APPLICATION STATUS	Awaiting Request for Examination

View Documents

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In case of any discrepancy in status, kindly contact ipo-helpdesk@nic.in

FORM 1 THE PATENTS ACT, 1970 (39 of 1970) & THE PATENTS RULES, 2003 APPLICATION FOR GRANT OF PATENT [See sections 7,54 & 135 and rule 20(1)]	(FOR OFFICE USE ONLY) Application No.: ..... Filing Date: ..... Amount of Fee Paid: ..... CBR No.: ..... Signature: .....

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3. TITLE OF THE INVENTION: STRESS DETECTOR AND REDUCER WEARABLE DEVICE USING IOT

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Sr.No.	Country	Application Number	Filing Date	Name of the Applicant	Tilte of the Invention

6. PARTICULARS FOR FILING PATENT COOPERATION TREATY (PCT) NATIONAL PHASE APPLICATION:

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7. PARTICULARS FOR FILING DIVISIONAL APPLICATION

Original (first) Application Number	Date of Filing of Original (first) Application

8. PARTICULARS FOR FILING PATENT OF ADDITION:

Main Application / Patent Number:	Date of Filing of Main Application

9. DECLARATIONS:

(i) Declaration by the inventor(s)

I/We ,B Padmaja,K Laxminarayanamma,B J D Kalyani,B. Shashirekha,Rasmita Kumari Mohanti,E Krishna Rao Patro,Avula Madhuri,M Kalaiarasi, is/are the true & first inventor(s) for this invention and declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) of the inventor(s): .....

(c) Name(s): B Padmaja,K Laxminarayanamma,B J D Kalyani,B. Shashirekha,Rasmita Kumari Mohanti,E Krishna Rao Patro,Avula Madhuri,M Kalaiarasi

(ii) Declaration by the applicant(s) in the convention country

I/We, the applicant(s) in the convention country declare that the applicant(s) herein is/are my/our assignee or legal representative.

(a) Date: -----

(b) Signature(s) : .....

(c) Name(s) of the singnatory: B Padmaja,K Laxminarayanamma,B J D Kalyani,B. Shashirekha,Rasmita Kumari Mohanti,E Krishna Rao Patro,Avula Madhuri,M Kalaiarasi

(iii) Declaration by the applicant(s)

- **The Complete specification relationg to the invention is filed with this application.**
- **I am/We are, in the possession of the above mentioned invention.**
- **There is no lawful ground of objection to the grant of the Patent to me/us.**

10. FOLLOWING ARE THE ATTACHMENTS WITH THE APPLICATION:

Sr.	Document Description	FileName

I/We hereby declare that to the best of my/our knowledge, information and belief the fact and matters stated hering are correct and I/We request that a patent may be granted to me/us for the said invention.

Dated this(Final Payment Date): 21.03.21

Signature: .....

Name: Yogeshwari M

To The Controller of Patents

The Patent office at CHENNAI

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