Patent Search

Invention Title	Early Detection of Atherosclerosis with cloud IoT
Publication Number	51/2021
Publication Date	17/12/2021
Publication Type	INA
Application Number	202141057801
Application Filing Date	13/12/2021
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	BIO-MEDICAL ENGINEERING
Classification (IPC)	A61B0005000000, A61B0005024000, A61B0005020000, A61B0005021000, A61B0005145500

Inventor

Name	Address	Country	Nationality
Pavan Kumar E	Dept of ECE ,Sai Vidya Institute of Technology, Rajanukunte, Bangalore - 560064	India	India
MOHAN KUMAR K N	BGANS, #12, 4th floor, 4th A cross, Vinayakanagara, Magadi main road, Bangalore 560079	India	India
KRISHNAMURTHY K.T	Dept of ECE,BMS college of engineering p o box no 1908, bull temple Road Bangalore 560019	India	India
MANORANJAN KUMAR	Dept of ECE ,Sai Vidya Institute of Technology, Rajanukunte, Bangalore - 560064	India	India
REKHA MURTHY	Dept of EEE ,Sai Vidya Institute of Technology, Rajanukunte, Bangalore - 560064	India	India
ASHOK KUMAR S	Dept of EEE, Chennai Institute of Technology, Sarathy Nagar, Kundrathur, Chennai - 600069	India	India
ANITHA K	Prathyusha Engineering College, Poonamallee- Tiruvallur Road, Aranvayal Kuppam Village, Aranvayal Post, Tiruvallur Taluk-602025	India	India
KARTHIKEYAN R	Dept of ECE, Chennai Institute of Technology, Sarathy Nagar, Kundrathur, Chennai - 600069	India	India
JENI ANTO FRANCIS	Dept of RF DEWDAS TECHNOLOGY PVT LTD A-308,DAADYS ELIXIR APARTMENT, ELECTRONIC CITY,BANGALORE 560100	India	India
SHREYAS B V	#002, KP Apts, 192 195, 1st Main, 1st Block, BEL Layout, Vidyaranyapura, BEngaluru 560097	India	India

Applicant

Name	Address	Country	Nationality
pavan kumar E	SAI VIDYA INSTITUTE OF TECHNOLOGY	India	India

Abstract:

Our Invention is Sensor-Based System Implementation for a non-invasive method to estimate Atherosclerosis. Atherosclerosis is a major problem in the developing world. Atherosclerosis is the condition in which there is blockage of arteries by deposition of cholesterol in the lumen of blood vessels. This blockage will obstruct the flow of blood which is known as Ischemia. This Ischemia will lead to cardiac and other vascular diseases which lead to stroke, Myocardial Infarction, etc. Our invention focuses mainly on the detection of Atherosclerosis by using Photoplethysmography (PPG) signals. Photoplethysmography (PPG) is a non-invasive technique of measuring pulse signals that are caused due to the change in volume of the blood in the human body which will result from the circulatory system. PPG acquisition module is developed to acquire the PPG signals. The module consists of a sensor circuit and IR LED to acquire the pulse signal from the fingertip. The obtained raw PPG signal consists of noise signals and low-frequency signals which are amplified and filtered to obtain PPG signal by using IC. Thus, the noise signal is subjected to an amplification and filtering process to obtain the PPG signal. The acquired PPG signal is Connected to the computational system and it is processed in the cloud with IoT.

Complete Specification

Claims:1. A computer-implemented method comprising: Atherosclerosis is amajor problem in the developing world. Atherosclerosis is the condition in which there is blockage of arteries by deposition of cholesterol in the lumen of blood vessels. This blockage will obstruct the flow of blood which is known as Ischemia. This Ischemia will lead to cardiac and other vascular diseases which lead to stroke, Myocardial Infarction, etc.
Our invention focuses mainly on the detection of Atherosclerosis by using Photoplethysmography (PPG) signals. Photoplethysmography (PPG) is a non-invasive technique of measuring pulse signals that are caused due to the change in volume of the blood in the human body which will result from the circulatory system. PPG acquisition module is developed to acquire the PPG signals. The module consists of a sensor circuit and IR LED to acquire the pulse signal from the fingertip. The obtained raw PPG signal consists of noise signals and low-frequency signals which are amplified and filtered to obtain PPG signal. Thus, the noise signal is subjected to an amplification and filtering process to obtain the PPG signal. The acquired PPG signal is Connected to the computational system, and it is processed in the cloud with IoT.

2. According to claim1# wherein, the invention is to the system helps to develop the PPG acquisition system to acquire the PPG signals from the subjects.

3. According to claim1#wherein, the invention is to acquire PPG signal is processed in by a system comprising, computational system and storage device storing instructions that are operable with a software algorithm.

4. According to claim1#wherein, the invention is to store the signal in Cloud, IoT Cloud-based information access systems and data are visualized in mobile using GUI

View Application Status

Department of Industrial Policy and Promotion
Government of India

Page last updated on: 26/06/2019