**REMOTE MONITORING SYSTEM OF HEART CONDITIONS USING IOT PLATFORM**

**ABSTRACT**

An Electrocardiogram (ECG) is the primary signal used for the detection of any cardiovascular abnormalities, but conventional clinical ECG scans include restrained time-duration ECG signals, lacking the asymptomatic or essential attributes of Cardio Vascular Diseases (CVDs). Therefore, developing a system for real-time and long-term ECG monitoring is crucial for the early diagnosis of CVDs.

With technological advancements in the field of wearable electronics and loT innovations, developing a system for convenient and long-term ECG monitoring is easily possible. We suggest a new approach for ECG measurement based on Internet of Things (loT) schemes that can facilitate long-term monitoring. The required ECG information is acquired utilizing a wearable observing node consisting of an AD8232 ECG sensor and pulse oximeter sensor MAX30102. The conditioned ECG signal and pulse level are transmitted to the loT cloud utilizing Wi-Fi technology. We will use the Node MCU ESP8266 wi-fi module to transmit the ECG data to the loT cloud. The program code was developed to acquire ECG waves along with important features like R-R interval, QRS duration, PR interval, QT interval, HRV, heart rate and pulse level , which can be used for the detection of arrhythmia conditions. Once the data is sent to cloud , it could be organized and certain readings can be compared and analysed medically and may provide necessary emergency health assistance.

The obtained results will be sent to the doctor and patient whose numbers are already registered . With this technology ,the patient can access his/her health details remotely.

**Keywords** : IoT,ECG,ESP8266,AD8232,MAX30102

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