

Wearable Cardiac Health Monitoring System, Indian Patent

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ABSTRACT

The invention provides a non-invasive health monitoring system (CHMS) to measure cardiac health parameters of a patient. The CHMS includes a receiver to receive vital signals from multiple sensors and other child devices. These signals are then processed in order to provide vital data to calculate cardiac health parameters. The CHMS measures cardiac health parameters non-invasively in real time with fault-tolerant approach and continuously monitoring & alerting the status of a cardiac health of a human. The CHMS transmits the processed data to a centralized monitoring station via a cloud platform through a secured wired or wireless network gateway.

KEY APPLICATION AREAS

- 1.Wearable healthcare and remote patient monitoring.
- 2.Continuous cardiac health monitoring.
- 3.IoT-enabled medical devices.
- 4.Real-time biosignal processing.
- 5.Preventive and personalized healthcare.

POTENTIAL USES

- 1.Continuous monitoring of heart rate and cardiac activity using ECG, PPG, and PCG sensors.
- 2.Remote patient monitoring in homes and hospitals.
- 3.Early detection of cardiovascular abnormalities.
- 4.Health tracking through smart wearables (watch, wristband, ring, shirt, cap, shoe, etc.).

5. Wireless transmission of vital parameters to healthcare providers or monitoring stations.