Walking Stick with Heart Attack Detection

Abstract:

- This project aims to develop a smart walking stick integrated with a heart attack detection system using a microcontroller and ECG (Electrocardiogram) circuitry.

- The smart walking stick is designed to provide continuous monitoring of the user's heart activity, enabling early detection of cardiac events and timely intervention.

- The system incorporates an ECG sensor circuit connected to a microcontroller unit (such as Arduino or similar), which processes the ECG signals in real-time.

- The ECG sensor captures the electrical activity of the heart, producing waveform data that reflects heart rate and rhythm variations.

- The project involves hardware integration, sensor calibration, and software development for signal processing and decision-making algorithms.

- The goal is to create a portable and user-friendly device that enhances safety for individuals prone to cardiovascular issues, particularly the elderly and those with pre-existing heart conditions.