

ABSTRACT

The proposed system introduces an innovative healthcare monitoring system tailored for animals, leveraging Internet of Things (IoT) technology to integrate temperature, SpO₂ (blood oxygen saturation), and pulse sensors. The system's primary objective is to enable real-time monitoring of critical health parameters essential for safeguarding the well-being of animals across diverse veterinary settings. In addition to conventional vital sign monitoring, the system incorporates an advanced thermoelectric temperature control mechanism, integrating thermo couple devices to regulate body temperature in response to external environmental conditions. By seamlessly integrating multiple sensors into an IoT framework, the proposed system offers comprehensive animal health monitoring capabilities, enhancing situational awareness and facilitating timely intervention when necessary. This innovative approach holds significant promise for optimizing the health of animals, particularly in domestic and challenging Zoological environments.