ABSTRACT

Innovative Depression Management through IoT Technologies

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Keywords: Depression management, Internet of Things (IoT), mental well-being

Depression is a prevalent mental health condition resulting from a complex interplay of social, psychological, and biological factors (Remes et al., 2021). Current approaches in depression healthcare have primarily focused on detection, often neglecting the technological aspects of management. This research aims to develop an efficient and effective solution for managing depression through Internet of Things (IoT).

IoT devices in smart homes can gather data to optimise living conditions for individuals with depression. Wearable devices collect physiological data, providing insights into patients' emotional states (Teixeira et al., 2021). Cameras can capture and analyse facial images using emotion detection algorithms to assess emotional states.

Implementing IoT-based depression management is expected to result in a highly effective and scalable system. Continuous monitoring of indicators will provide real-time insights and personalised recommendations, significantly improving support for adults with depressive disorders (Hardy et al., 2023). This approach aims to enhance mental health outcomes, reduce the severity of depressive episodes, and improve overall quality of life.

This research addresses the urgent need for innovative solutions to manage depression. Integrating IoT devices for continuous monitoring and advanced emotion detection algorithms represents a breakthrough in mental health. The system aims to enhance patient monitoring and provide real-time, actionable insights to improve the quality of life for individuals with depression. Additionally, this research contributes to digital health and smart home technologies, showcasing interdisciplinary approaches to solving complex health issues.

In this presentation, I will cover the development of our IoT-based depression management system, highlighting the integration of wearables, smart home sensors, and emotion detection algorithms. I will discuss our challenges in creating a real-time monitoring system and the innovative solutions we implemented. Additionally, I will share insights into applications of IoT in mental health, highlight potential improvements in patient outcomes, and explore future implications for digital health.

References

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