

# **IoT Applications in Healthcare and Industry: Current State, Challenges, and Future Perspectives**

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**Abstract:** *The Internet of Things (IoT) has revolutionized various domains by enabling seamless communication between devices and systems. The Internet of Things (IoT) has revolutionized various domains by enabling seamless communication between devices and systems. This technological marvel connects the physical and digital worlds, creating smarter environments and driving unprecedented innovation. From healthcare to industry, transportation to agriculture, IoT is reshaping how we interact with technology, making processes faster, more efficient, and remarkably intuitive. In healthcare, IoT empowers patients with remote monitoring, smart devices, and real-time data insights, ensuring better outcomes and accessible care. In industries, IoT drives automation, predictive maintenance, and optimized supply chains, reducing costs and boosting productivity. This paper explores the applications of IoT in healthcare and industry, highlighting its current state, challenges, and future prospects. A comprehensive literature review is conducted to understand the advancements, and potential solutions to key challenges such as security, interoperability, and data management are discussed. Finally, the paper presents a roadmap for future research to maximize IoT's potential in these critical sectors*

**Keywords:** IoT, Healthcare, Industry, Remote Patient Monitoring