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Editorial: Real-world deployment of internet of things (IoT) applications, experiences, and challenges

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Editorial on the Research Topic

[Real-world deployment of internet of things \(IoT\) applications, experiences, and challenges](#)

The Internet of Things (IoT) has emerged as a transformative force in the digital landscape, promising to reshape our world by connecting devices and systems in ways previously unimaginable. From smart homes and cities to urban farming and healthcare, IoT applications are permeating every facet of our lives, driving efficiency, and enabling new services. However, the deployment of IoT applications in real-world settings is not without its challenges. The complexity of IoT systems, which involve a multitude of interconnected devices, each with its own unique specifications and requirements, presents significant challenges ranging from technical issues such as connectivity, interoperability, and security, to broader concerns such as Artificial intelligence (AI), privacy, supply chain, data management, and regulatory compliance. As IoT becomes a critical component in every aspect of systems, these challenges must be addressed to ensure that IoT can be deployed efficiently and securely.

This Research Topic focuses on the real-world deployment of Internet of Things (IoT) applications, and it aims to shed light on the experiences and practical challenges encountered in the field. We have curated four insightful articles that delve into various aspects of IoT deployment.

[Ramos and Arumugam](#) discusses the role of process automation in intelligence orchestration. The article explores how IoT can be leveraged to automate processes, thereby enhancing efficiency and productivity. The authors provide a comprehensive analysis of the current state of process automation and its potential for future growth.

[Chan et al.](#) presents a review on the challenges faced during the deployment of IoT devices in building management systems. It provides an in-depth study of the issues encountered and offers potential solutions to overcome these challenges.

[Elijah et al.](#) presents a case study on transforming urban mobility through IoT. It details how proximity-based Bluetooth beacons can be used for public bus fleet tracking, thereby

improving the efficiency of urban transportation systems. The authors share their experiences and lessons learned from the deployment of this technology.

Last but not least, Kirwan et al. explores the use of IoT in agriculture, specifically in the context of a scalable growbox architecture. It discusses how IoT can revolutionize farming practices, making them more efficient and sustainable. The authors provide a detailed analysis of the architecture and its potential impact on the future of agriculture.

In conclusion, this Research Topic provides valuable insights into the real-world deployment of IoT applications. It highlights the experiences and challenges faced in the field, offering readers a comprehensive understanding of the current state of IoT deployment and its future prospects. Through these insights, we hope to contribute to the ongoing efforts to realize the full potential of IoT.

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