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A SURVEY ON MACHINE LEARNING IN INTERNET OF THINGS: ALGORITHMS, STRATEGIES AND APPLICATIONS

In recent years, there has been a worldwide interest in WSN and Internet of Things (IoT). IoT can be defined as a global network infrastructure composed of various connected devices that rely on communication, sensory, information processing technologies, and networking.

In the Section 1, they have introduced WSN and IoT's paradigms, followed by a demonstration of the important ML's role to surmount challenges in these technologies. The main objective of Section 2 is to demonstrate the important role of machine learning in the WSN and IoT technology.

In Section 3, a classification of machine learning categories that consist of four big categories that are supervised learning, unsupervised learning, semi-supervised learning, and reinforcement learning.

There has been a worldwide interest in WSN and IoT. It will not be an exaggeration to consider WSN and IoT as two of the most researched areas in the last decade.

They are few overviews of research literature on IoT and WSNs that have been covered in this research. The collaborative nature of WSN and IoT brings several advantages, including self-organisation, flexibility, rapid deployment, and processing capacity.

It comes with several challenges like hardware design, application design, communication protocols, scalability, heterogeneity, network coverage, energy conservation, communication link failures, decentralized management, QoS, security and privacy to name a few. New methods and techniques are needed to overcome these challenges.

The large-scale deployment of IoTs especially in smart cities environment generate large amount of data. The present machine learning schemes are unable to cope with large amount of dynamic data in real time environment hence much data is wasted without information extraction.