

# The Internet of Things (IoT) An Overview, Applications, and Challenges

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**Abstract:** *The Internet of Things (IoT) refers to the interconnected network of physical devices that communicate with each other and share data through the internet. IoT is transforming industries by improving efficiency, reducing costs, and enabling data-driven decision-making. This paper explores the fundamental concepts of IoT, its applications across various sectors, and the challenges it faces, including security, privacy, and scalability. By understanding these aspects, organizations can better leverage IoT technologies to drive innovation and improve operational performance.*

**Keywords:** Internet, IOT, data, fundamental, security, performance