# Note on Applications of Internet of Things

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## Perspective

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## INTRODUCTION

The Internet of Things (IoT) refers to physical objects (or groups of such objects) that are equipped with sensors, processing power, software, and other technologies and may communicate with other devices and systems over the Internet or other communication networks. Because of the confluence of numerous technologies, such as ubiquitous computing, commodity sensors, increasingly powerful embedded systems, and machine learning, the field has progressed.

## DESCRIPTION

Traditional fields such as embedded systems, wireless sensor networks, control systems, and automation enable the Internet of Things. IoT is most closely associated with products that support the concept of the "smart home" in the consumer market, such as lighting fixtures, thermostats, home security systems and cameras, and other home appliances that can be controlled by devices associated with that ecosystem, such as smartphones and smart speakers. Healthcare can benefit from the Internet of Things.

There are several concerns about the risks associated with the growth of IoT technologies and products, particularly in the areas of privacy and security, and as a result, industry and government efforts to address these concerns have begun, including the creation of international and local standards, guidelines, and regulatory frameworks.

## Consumer applications

Connected automobiles, home automation, wearable technology, connected health, and appliances with remote monitoring capabilities are among the many IoT products being developed for consumer usage.

A platform or hubs that control smart gadgets and appliances could be the foundation of a smart home or automated house. For example, manufacturers can use Apple's Home Kit to have their home appliances and accessories controlled by an app on iOS devices like the iPhone and Apple Watch. This might be a standalone app or an iOS native app like Siri. This is proven by Lenovo's Smart Home Essentials, a series of smart home gadgets that can be operated without the use of a Wi-Fi bridge using Apple's Home app or Siri.

Home automation, which can include lighting, heating and air conditioning, media and security systems, and video systems, includes IoT devices. Long-term advantages could include energy savings by automatically turning off lights and electronics, as well as keeping inhabitants aware of their usage.

The Amazon Echo, Google Home, Apple's Home Pod, and Samsung's Smart Things Hub are examples of dedicated smart home hubs that are marketed as separate platforms to link multiple smart home gadgets. There are various non-proprietary, open source ecosystems, such as Home Assistant, OpenHAB, and Domoticz, in addition to commercial systems. One of the most important uses of a smart home is to assist the elderly and those with disabilities. Assistive technology is used in these home systems to meet the owner's individual limitations. Users with vision and movement impairments can benefit from voice control, while hearing-impaired users can benefit from alert systems that are directly connected to cochlear implants. They can also be outfitted with extra security features. Sensors that monitor for medical emergencies such as falls or seizures are examples of these characteristics. When smart home technology is used in this way, it can give consumers greater flexibility and improve their quality of life.

## Organizational applications

The Internet of Medical Things (IoMT) is an Internet of Things (IoT) application for medical and health-related uses, as well as data collecting and analysis for research and monitoring. The Internet of Things (IoMT) has been dubbed "Smart Healthcare" because it is the technology that allows for the creation of a digital healthcare system that connects available medical resources and healthcare services. The Internet of Medical Things (IoMT) is an Internet of Things (IoT) application for medical and health-related uses, as well as data collecting and analysis for research and monitoring. The Internet of Things (IoMT) has been dubbed "Smart Healthcare" because it is the technology that allows for the creation of a digital healthcare system that connects available medical resources and healthcare services.

Remote health monitoring and emergency notification systems can both benefit from IoT devices. Blood pressure and heart rate monitors to complex devices capable of monitoring specialist implants such as pacemakers, Fitbit electronic wristbands, or advanced hearing aids are examples of health monitoring gadgets. Some hospitals have begun to use "smart beds", which can detect when they are occupied and when a patient tries to get up. It may also adjust itself to ensure that the patient receives the proper pressure and support without the need for nurses to intervene. Furthermore, the usage of mobile devices to enhance medical follow-up spawned the term 'm-health,' which makes use of studied health data.