

IoT

After completing this episode, you should be able to:

- Discuss the evolving technology of Internet of Things

Description: In this episode, you will learn about the evolving technology of the Internet of Things (IoT) and the impact the cloud has had on this exciting new segment of technology.

Internet of Things (IoT)

Sensors - sensors in IoT collect and transmit data on various physical parameters such as temperature, humidity, motion, and light, enabling real-time monitoring and automation. These sensors form the backbone of smart systems in homes, cities, and industries, enhancing efficiency, safety, and decision-making through continuous data streams and connectivity.

Gateways - gateways in IoT serve as critical intermediaries that connect edge devices and sensors to the cloud or central systems, facilitating data aggregation, processing, and secure transmission. They enable seamless communication across diverse protocols and networks, enhancing the efficiency, scalability, and security of IoT ecosystems.

Communication - communication in IoT involves the exchange of data between interconnected devices using various wireless and wired protocols like Wi-Fi, Bluetooth, Zigbee, and MQTT. This connectivity enables real-time data sharing, remote monitoring, and automation, driving the functionality and intelligence of smart environments and systems.

Transmission protocols - transmission protocols in IoT facilitate efficient and reliable communication between devices and networks, ensuring data is transmitted securely and with minimal latency. Common protocols include MQTT, CoAP, and HTTP, each optimized for specific use cases such as low-power devices, real-time updates, or large-scale deployments.

Additional resources

- IoT and Cloud Computing: <https://www.geeksforgeeks.org/iot-and-cloud-computing/> (<https://www.geeksforgeeks.org/iot-and-cloud-computing/>)