

IoT a Gruppi

2) Explain how IoT works

IoT works by connecting sensors or smart devices that can perform actions to a control gateway connected to internet or directly to the internet and to devices like user's phone or computer. There are different protocols and technologies for IoT devices like Bluetooth, BLE, WiFi, MQTT, ZigBee, Matter, Z-Wave. Some IoT devices have their own integrated gateway, some other relies on cloud, but the majority relies on local gateways installed on other device in the nearby. For private use, like smart home, there are proprietary gateways made by companies like Ikea that are pre-configured to work with their own devices without the need of difficult configuration, or there are open source generic gateways operating system, like home assistant, that are completely free and can be installed on a computer in your home or on a SBC (Like a Raspberry Pie) and thanks to the community they work with almost all IoT devices, but sometimes they need some more advanced configurations. With some gateways, like Home Assistant, you can even use your phone as a IoT device, using it to trace user position or find BLE devices near the user's phone and execute custom scripts or automation, and they permit the most expert users to create custom integrations even for self-made IoT devices. IoT devices can be made at home with programmable boards like esp32 or esp8266 that are pretty cheap but aren't much powerful, or with more bigger and powerful boards like Arduino or Raspberry, and you can connect sensors or light

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4) What is a major concern about IoT?

A major concern about IoT is security. IoT devices are made to collect information, but due to their limited processing power and memory it is difficult to implement strong security measures, leaving them vulnerable to attack that can be used to gather sensible information collected by the device. Sometimes they can be used to launch attacks to other device on a network.

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