**20 IoT APPLICATIONS**

**1. Smart Homes**

One of the best and the most practical applications of IoT, smart homes really take both, convenience and home security, to the next level. Though there are different levels at which IoT is applied for smart homes, the best is the one that blends intelligent utility systems and entertainment together. For instance, your electricity meter with an IoT device giving you insights into your everyday water usage, your set-top box that allows you to record shows from remote, Automatic Illumination Systems, Advanced Locking Systems, Connected Surveillance Systems all fit into this concept of smart homes. As IoT evolves, we can be sure that most of the devices will become smarter, enabling enhanced home security.

**2. Smart City**

Not just internet access to people in a city but to the devices in it as well – that’s what smart cities are supposed to be made of. And we can proudly say that we’re going towards realizing this dream. Efforts are being made to incorporate connected technology into infrastructural requirements and some vital concerns like Traffic Management, Waste Management, Water Distribution, Electricity Management, and more. All these work towards eliminating some day-to-day challenges faced by people and bring in added convenience.

**3. Self-driven Cars**

We’ve seen a lot about self-driven cars. Google tried it out, Tesla tested it, and even Uber came up with a version of self-driven cars that it later shelved. Since it’s human lives on the roads that we’re dealing with, we need to ensure the technology has all that it takes to ensure better safety for the passenger and those on the roads.

The cars use several sensors and embedded systems connected to the Cloud and the internet to keep generating data and sending them to the Cloud for informed decision-making through Machine Learning. Though it will take a few more years for the technology to evolve completely and for countries to amend laws and policies, what we’re witnessing right now is one of the best applications of IoT.

**4. IoT Retail Shops**

If you haven’t already seen the video of Amazon Go – the concept store from the eCommerce giant, you should check it out right away. Perhaps this is the best use of the technology in bridging the gap between an online store and a retail store. The retail store allows you to go cashless by deducting money from your Amazon wallet. It also adds items to your cart in real-time when you pick products from the shelves.

If you change your mind and pick up another article, the previous one gets deleted and replaces your cart with the new item. The best part of the concept store is that there is no cashier to bill your products. You don’t have to stand in line but just step out after you pick up your products from shelves. If this technology is effective enough to fetch more patronage, this is sure to become a norm in the coming years.

**5. Farming**

Farming is one sector that will benefit the most from the Internet of Things. With so many developments happening on tools farmers can use for agriculture, the future is sure promising. Tools are being developed for Drip Irrigation, understanding crop patterns, Water Distribution, drones for Farm Surveillance, and more. These will allow farmers to come up with a more productive yield and take care of the concerns better.

**6. Wearables**

Wearables remain a hot topic in the market, even today. These devices serve a wide range of purposes ranging from medical, wellness to fitness. Of all the IoT startups, Jawbone, a wearables maker, is second to none in terms of funding.

**7. Smart Grids**

One of the many useful IoT examples, a smart grid, is a holistic solution that applies an extensive range of Information Technology resources that enable existing and new gridlines to reduce electricity waste and cost. A future smart grid improves the efficiency, reliability, and economics of electricity.

**8. Industrial Internet**

The Industrial Internet of Things consists of interconnected sensors, instruments, and other devices connected with computers’ industrial applications like manufacturing, energy management, etc. While still being unpopular in comparison to IoT wearables and other uses, market researches like Gartner, Cisco, etc., believe the industrial internet to have the highest overall potential.

**9. Telehealth**

 Telehealth, or Telemedicine, hasn’t completely flourished yet. Nonetheless, it has great future potential. IoT Examples of Telemedicine include the digital communication of Medical Imaging, Remote Medical Diagnosis & Evaluations, Video Consultations with Specialists, etc.

**10. Smart Supply-chain Management**

Supply-chains have stuck around in the market for a while now. A common example can be Solutions for tracking goods while they are on the road. Backed with IoT technology, they are sure to stay in the market for the long run.

**11.**[**Weather Reporting System**](https://nevonprojects.com/iot-weather-reporting-system/)

This is one of the excellent IoT project ideas for beginners. This IoT-based weather reporting system is specifically designed to facilitate the reporting of weather parameters over the Internet. This is one of the best IoT projects where the system is embedded with temperature, humidity, and rain sensors that can monitor the weather conditions and provide live reports of weather statistics.

### 12.[****Face Recognition Bot****](https://www.electronicsforu.com/electronics-projects/design-iot-face-recognition-ai-robot)

This [IoT project involves building a smart AI bot](https://www.upgrad.com/blog/top-artificial-intelligence-project-ideas-topics-for-beginners/) equipped with advanced facial recognition capabilities. This is one of the best IoT Projects where the intelligent AI bot is designed to recognize the faces of different people or a single person and also their unique voice.

### 13.[****Smart Garage Door****](https://circuitdigest.com/microcontroller-projects/iot-smart-garage-door-opener-using-raspberry-pi)

Yes, you can use IoT technology to control and operate your garage door! The IoT-based smart garage door eliminates the need for carrying bulky keychains. All you need is to configure and integrate your smartphone with the home IoT network, and you can effortlessly open or close your garage door with just a few clicks of a button.

### 14.[****Air Pollution Monitoring System****](https://www.instructables.com/id/Air-Pollution-Detector/)

One of the best ideas to start experimenting you hands-on **IoT projects for students** is working on Air pollution monitoring system. Air pollution is a menace in all parts of the world, and monitoring air pollution levels is a challenge that we’re facing. While traditional air pollution monitoring systems fail to monitor air pollution levels successfully and the contaminants, IoT-based air pollution monitoring systems can both monitor the level of air pollution in cities and save the data on web servers for future use.

### ****15.****[Smart Parking System](https://www.ubuntupit.com/best-internet-of-things-projects-iot-projects-that-you-can-make-right-now/)

With cities and urban areas getting crowded by the minute, finding a parking space is nothing short of a challenge. It is not only time-consuming but also quite frustrating. Thanks to IoT, there’s a solution for solving the parking problem crisis. This IoT-based smart parking system is designed to avoid unnecessary travelling and harassment in the search for an appropriate parking area.

### 16.[Smart Gas Leakage Detector Bot](https://nevonprojects.com/iot-gas-pipe-leakage-detector-insect-robot/)

Gas pipes are an indispensable component of both homes and industrial companies. Any leakage in gas pipes can lead to fire accidents and also contaminate the air with pollutants, thereby causing a disastrous effect in the air and the soil. This IoT-based project is explicitly built to combat the issue of gas leakage.

### ****17.****[Smart Anti-Theft System](https://nevonprojects.com/iot-based-anti-theft-floor-mat-system-using-raspberry-pi/)

Security is one of the primary choices for homes, businesses, and corporations. Having a robust security system helps to keep unwanted intruders at bay. The IoT-based anti-theft system is the perfect solution for safeguarding homes as well as industrial enterprises

### ****18.Liquid Level Monitoring System****

This IoT-based project involves building a liquid level monitoring system that can remotely monitor a particular liquid’s level and prevent it from overflowing. This project holds immense value for the industrial sector that uses large volumes of fluids in their day-to-day operations. Apart from detecting a liquid’s level, this monitoring system can also be used to track the usage of specific chemicals and to detect leaks in pipelines

### ****19.Health Monitoring System****

This is one of the interesting IoT project ideas to create. This IoT-powered health monitoring system is designed to allow patients to take charge of their own health actively. The system will enable users to monitor their body vitals and send the data to qualified doctors and healthcare professionals. The doctors can then provide patients with immediate solutions and guidance based on their health condition. The sensors in the application can monitor patient vitals like blood pressure, sugar level, and heartbeat. If the vital stats are higher/lower than usual, the system will immediately alert the doctor

### ****20.Flood Detection System****

Floods are a common natural disaster that occurs almost every year in our country. Floods not only destroy agricultural fields and produce, but they also take a significant toll on life. This is why early flood detection is extremely vital to prevent the loss of life and valuable assets