# On the benefits and drawbacks of AI and IoT in different industries

*AI and IoT are the two biggest technological components revolutionising every industry at present. AI is expected to reach a global market value of $267B by 2027 with its far-reaching benefits. Moreover, AI by 2030, is likely to contribute $15.7T to the global economy.*

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When it comes to AI in the IoT market, it is expected to <u>rise at a 27.3% CAGR rate</u>. It all contributes to the role of AI in processing the huge volume of data in real-time gathered from IoT devices. Internet-of-Things is the keystone in several industries and organisations to help businesses empower and upgrade with the use of BigData.

AI together with IoT is bringing enhanced advancements by providing avenues to handle and manage data. The avalanche of data being gathered from uncountable IoT devices let organisations strategically grow their business. If you want to learn about some interesting benefits and mind-boggling drawbacks, read on.

# Benefits of IoT and AI

The idea of integrating IoT and AI components builds Smart Cities to drive operations using cutting-edge tools.

## Manufacturing Industry

Automated systems integrated into smart manufacturing machinery help

in streamlining business operations in a manufacturing industry. AI enables businesses to run with intelligence and smartness beyond human capabilities.

Moreover, the IIoT helps in connecting all the IoT devices in a factory integrated with the manufacturing processes to gather BigData. It allows the control of sensory equipment and makes the system programmable, which doubles the efficiency.

Secondly, with the _introduction of robots_ in the manufacturing sector, the production time is increased to 24/7 which is impossible with a human workforce. The industries either have to manage multiple shifts or exhaust their workers to their core, which is an impractical move.

Thirdly, when it comes to safety and security, AI and IoT devices enable state-of-the-art security solutions. It detects errors, bugs, gives a predictive analysis of system failure, and makes the system work with an ultra-efficient performance. Some other benefits are listed below:

- Ensures Predictive Maintenance
- Reduces Costs
- Provides Greater Efficiency
- Ensures Quality Control
- Enables Quick Decision Making

## Healthcare Industry

The Healthcare industry has been one of the fastest-growing industries with the integration of AI and IoT. One of the critical components involved in the industry is to gather accurate information to address and diagnose the medical issue. The need is rightly catered with the help of _IoT enabled devices having AI integration._ Real-time analytics lets the professional detect vital patient data and prepare proper treatments.

Moreover, IoT helps in improving patient outcomes and comfort. The *Journal of Health Environments Research and Design* published a study indicating the value of comfort, privacy, and accessibility for the patients in a hospital room.

Thirdly, the technology also addresses security concerns. The discrete data and information of each patient is timely gathered at the time of need and is kept in utmost privacy. Some of the tech devices integrated with IoT and AI include wearables technology, automated window shades, customisable lighting controls, automated sensory and monitoring medical equipment. Some of the other benefits are listed below:

- Assists Research
- Saves Time And Resources
- May Reduce Physician Stress
- Helps Physicians Make Better Decisions
- Makes Healthcare Facilities Safer

## Service-based industry

Automation and connectivity are the two concepts that characterise IoT. However, when it comes to AI, its superhuman intelligence and real-time analysis are what the world praises the most.

In view of these capabilities, these technologies have been transforming the service-based industry in every way possible. They are adding scalability, transparency, and optimising performances of the organisations.

The interconnected devices allow efficient operation management. Whereas, with the help of real-time tracking, vendors can offer utmost transparency and clarity to the consumers. Furthermore, the industry is streamlining operations with the interaction of cloud-based servers that

not only enable a greater storage facility but improved security solutions as well.

AI helps in reducing the average handling time of the stock, which builds stronger relationships with the clientele. No customer has to wait to view and purchase the service or product they want. The optimised search bots on the platforms filter out the searches and increase the shopping time due to enhanced customer experience. Among the uncountable pros of the technology some of them are listed below:

- Customises Products Offerings
- Offers Effective Omni-Channel Presence
- Optimises Resources
- 24/7 Availability
- Improves Work Safety

# Drawbacks of IoT and AI

With pros comes cons that one may not overlook. The same happens with these super-intelligent and smart technologies. Here are some drawbacks listed below:

## Security concerns

Where IoT and AI enable improved security measures it creates some loopholes as well. _Cybersecurity is a threat to startups_ and even well-established businesses. More connectivity through IoT, in particular, can make way for data breaching, data loss, and hardware/network-based attacks.

## Technical complexity

Technical complexity comes as the second biggest trouble. Organisations

need to hire expert developers, programmers, and data scientists to make even minor programming edits in the system. There are a lot of technicalities involved that are difficult to comprehend let alone solve for an ordinary employee.

## Power dependency

Your entire system runs on power. The devices you use are connected and operated through power. So, if at any point you lose power or any bug appears in the system, your entire network can shut down. Your business will suffer a great deal of loss.

Making integration seamless and efficient, there will be a lot to come in 2022 in the domain of both Artificial Intelligence and IoT. Measures will be taken to ensure greater security and cover all the loopholes. Furthermore, the system will evolve to offer less complexity and greater scalability. Trends involving the growth of edge computing, advanced wearable, and cutting-edge automation are going to take over the industries. So, stay updated to power up your business.

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