

# Artificial Intelligence (AI) and the Internet of Things (IoT)

AI and IoT are part of the techno-geek lingo that is thrown around by everyone and anyone that want to sound smart.

Why should you care? Before we can answer this question, we need to first understand what AI and IoT are, and how it relates to each other.

## What is the Internet of Things?

The Internet of Things (or IoT) means different things to different people mainly because of the vast application field. But at its core, IoT refers to several physical devices with communication capabilities that can measure something specific with a sensor and report that back on regular intervals or perform specific tasks at specific intervals or when called upon.

### Projected Growth

Experts are estimating that there are more than 10 billion IoT devices deployed and based on its rate of uptake the predictions are that number will double or triple by 2025.

Judge for yourself, what items in your immediate environment are now connected to an online or cloud platform that was not connected say 5 years ago. Think garden sprinkler systems, home automation and control, alarms and likely even your vehicle.

## What is Artificial Intelligence?

Humans and animals have natural intelligence (well most of us have). We can reason and come to conclusions on the information we have available, learn from past experiences to do things the same way again (if the outcome was good) or avoid making the same mistakes. We are even able to come up with new ideas by doing research and then testing them in real life to see if any specific hypothesis holds true in real life.

Artificial Intelligence (or AI) is the attempt to give the same intelligence to a machine. And referring to “machine” I am casting a wide net that includes various forms of digital devices that could be cloud-based or reside on a physical device on the edge (in the field) and be even connected to mechanical components like in the field of robotics.

### What is the relation between AI and IoT?

As with everything, if you put garbage in, you will get garbage out. If the quality of the information that is available as input, the better the decision will be.

So, a huge number of strategic deployed IoT devices will serve as valuable real-time input for an AI to make a decision.

### For example, let's take a farmer without IoT and AI vs one with IoT and AI:

#### Without IoT and AI

The farmer must rely purely on what he or his staff see on the land and environment. Then based on experience, they will make decisions on their next actions.

#### With IoT and AI

With IoT and AI, the farmer could know which part of the land requires nutrients and does not have sufficient moisture based on the conditions experienced at present. AI can automatically control irrigation and nutrient application only in those areas where it is needed and deliver the exact amount that is needed for optimal results.

### Are IoT and AI a good thing?

Yes, of course! But there is always a “but”. As with any technology it can be used for good and bad.

### If used for good IoT and AI can:

- **Make things work more efficiently**
- **Create new solutions by sparking new ideas and better innovation**
- **Less downtime and better reliability**
- **More detailed insights giving organisations a greater ability to mitigate risks**
- **Affordable and reduces expenditure due to less wastage of time and resources**

### Why should you care?

IoT and AI are here to stay. There is a lot of investment going into IoT and therefore you should care about AI and IoT - because it affects you and will affect you even more in future.