What are the advantages and disadvantages of artificial intelligence (AI)?

We've all seen the headlines about AI, both the good and bad. Regardless of what you think of the risks of using AI, no one can dispute that it's here to stay. Businesses of all sizes have found great benefits from utilizing AI, and consumers across the globe use it in their daily lives.

But even people who are excited about AI can ask the question: what, exactly, are the advantages and disadvantages of using it?

In this article, we'll discuss the major benefits and drawbacks of adopting AI, both in everyday life and in business. We'll also talk through some use cases for AI, to give you an idea of how AI can help in your life.

In this article we'll cover:

What is artificial intelligence?

Artificial Intelligence is a branch of computer science dedicated to creating computers and programs that can replicate human thinking. Some AI programs can learn from their past by analyzing complex sets of data and improve their performance without the help of humans to refine their programming.

As AI has boomed in recent years, it's become commonplace in both business and everyday life. People use AI every day to make their lives easier – interacting with AI-powered virtual assistants or programs. Companies use AI to streamline their production processes, project gains and losses, and predict when maintenance will have to occur.

Learn more about artificial intelligence.

What are the advantages and disadvantages of AI?

There are always pros and cons to any technological advancement. There is a ton of debate about the benefits and risks of AI at every level. But beyond the headlines that either peddle hype or fear, what does AI do?

The advantages range from streamlining, saving time, eliminating biases, and automating repetitive tasks, just to name a few. The disadvantages are things like costly implementation, potential human job loss, and lack of emotion and creativity. So where do we net out?

Advantages of AI

Everyone knows that AI gives businesses an edge. The Appen State of AI Report for 2021 says that all businesses have a critical need to adopt AI and ML in their models or risk being left behind. Companies increasingly utilize AI to streamline their internal processes (as well as some customer-facing processes and applications). Implementing AI can help your business achieve its results faster and with more precision.

Eliminates human error and risk

The first major advantage of implementing AI is that it decreases human error, as well as risk to humans.

"To err is human…" - Alexander Pope, Enlightenment poet.

Everyone makes mistakes on occasion. That's not always a bad thing, but when it comes to producing consistent results, it certainly can be. Using AI to complete tasks, particularly repetitive ones, can prevent human error from tainting an otherwise perfectly useful product or service.

Similarly, using AI to complete particularly difficult or dangerous tasks can help prevent the risk of injury or harm to humans. An example of AI taking risks in place of humans would be robots being used in areas with high radiation. Humans can get seriously sick or die from radiation, but the robots would be unaffected. And if a fatal error were to occur, the robot could be built again.

24/7 availability

AI programs are available at all times, whereas humans work 8 hours a day. Machines can work all through the day and night, and AI-powered chatbots can provide customer service even during off-hours. This can help companies to produce more and provide a better customer experience than humans could provide alone.

Unbiased decision making

Humans disagree and allow their biases to leak through in their decisions all the time. All humans have biases, and even if we try and solve for them, they sometimes manage to sneak through the cracks.

On the other hand, provided the AI algorithm has been trained using unbiased datasets and tested for programming bias, the program will be able to make decisions without the influence of bias. That can help provide more equity in things like selecting job applications, approving loans, or credit applications.

Though if the AI was created using biased datasets or training data it can make biased decisions that aren't caught because people assume the decisions are unbiased. That's why quality checks are essential on the training data, as well as the results that a specific AI program produces to ensure that bias issues aren't overlooked.

Repetitive jobs

Even the most interesting job in the world has its share of mundane or repetitive work. This could be things like entering and analyzing data, generating reports, verifying information, and the like. Using an AI program can save humans from the boredom of repetitive tasks, and save their energy for work that requires more creative energy.

Cost reduction

As we addressed above, AI can work around the clock, creating more value in the same day as a human worker. And since AI can help to take over manual and tedious tasks, it frees up workers for higher-skilled tasks. That, ultimately, creates more value for the end-user or consumer.