

Artificial Intelligence: sounds scarier than it actually is

Explaining the basics of Artificial Intelligence and why you should include it in your daily processes now

Introduction

Artificial Intelligence (AI) is hip, hot & happening. The (often scary) possibilities encompassing the technological progress made in the field of AI can be seen on a near daily basis in different news outlets, social media and popular Netflix documentaries such as the Social Dilemma. For many, AI is bound to change the world as we know it and most people marvel at how governments and large corporations are using the technology.

For SMEs, AI seems to be far removed from their daily activities. Moreover, AI seems to be portrayed mainly as a threat to their existence. However, how AI can aid the activities of SMEs is barely discussed. This is a shame, because the openness and accessibility of the current AI-models provide ample opportunities for SMEs to add value to their business. Below, we will provide a short outline of what AI means, followed by a few use cases on how the use of AI can add value to SMEs.

Definition

Let's start with the definition of **AI**. AI is a collective name for different techniques and programs that try to simulate human skills by using computers. To give you an understanding of what AI is, we can use the common example of a program that "learns" to play chess (and even wins against a human), or a program that "learns" to recognize a person from a photo. These are skills that come naturally to us as humans, but are certainly not so obvious to a computer, because how does the computer know what a nose or ear is, if it can only read 1's and 0's? Where we as humans are just able to learn, a computer makes use of a **self learning algorithm**.

An **algorithm** is nothing more than a step-by-step plan. If you always fill the dishwasher in a particular way, you do this according to your own set of “rules”. For example, you always start with the forks followed by the plates. These rules (/ different steps) together form an algorithm. If you have a particular morning routine that you stick to, then you have a morning algorithm. Computer algorithms are basically nothing else than ‘if you take a fork, put it in this part of the cutlery drawer’ or something more appropriate ‘if a pixel is darker than the pixels around it, set a value to 1, otherwise to 0’. These examples are not too difficult to understand, more interesting is how all these simple step-by-step plans can mimic complex human behavior like “facial recognition”. Shortly said, that is by applying multiple step-by-step plans where one plan might focus on the ears and another on the nose. These algorithms together could form the total face. How does it distinguish between different persons? It can “learn” from all the information (or faces) that it has seen before. If during a certain step a mistake is made (wrong person), the algorithm “learns” from it and adjust the set of rules to prevent this mistake from happening again.

Categories of AI

Oftentimes, AI is mentioned within one breath with Machine Learning. As such, the terms can be confused in popular thought. However, Machine Learning is an example, a subset of AI. You can see this as a dove (Machine Learning) is a bird (AI), but not all birds are by definition a dove. Machine learning applies various statistical techniques to provide a computer the ability to learn. Three other relatively well-known categories of AI are:

- **Computer Vision:** The technique to provide a computer the necessary algorithm to see and understand digital videos and images.
- **Speech Recognition:** The technique to provide a computer the necessary algorithm to hear and understand audio.
- **Natural Language Processing:** The technique to provide a computer the necessary algorithm to read and understand text, as well as generate or correct sentences.

Use cases

What can AI at the end of the day mean for SMEs? Since SMEs usually have fewer in-house technical specialists, it can seem very difficult to start integrating AI into the business. Still, there are certain aspects where AI can easily be introduced:



- **Chatbots:**

Customer interaction has become extremely easy in the current day and age. Often this is also experienced as a pressure for entrepreneurs. After all, they have to be available at all times. One example of this is the chat on a website. Most entrepreneurs know they have to answer a chat within a few minutes or the customer is gone. To resolve this pressure, AI can help via providing a standardized answer via a chatbot. Chatbot software is getting readily accessible for virtually any site, allowing SMEs to be at least attending their client in first instance automatically and if the chatbot doesn't have a reply, the question can always be forwarded to an employee - or the customer can be referred to a contact form or telephone number.

- **Employee training:**

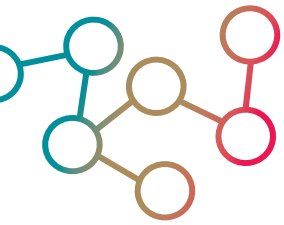
Many SMEs receiving phone calls from their clients have limited control over how their employees interact with the customer. Surely, there may be a sales-script, the occasional training and every now and then an entrepreneur can check the recorded phone call to guide the employee further. However, this is very time consuming and with the help of AI, the training of employees can be reduced tremendously.

- **Financial administration:**

AI systems can help create an overview and make financial predictions. Consider, for example, sales forecasts, reducing customer churn by calculating the probabilities that a customer will walk away, or being able to see the cash flow of your company in 'real-time': all based on data from your own company and therefore applied on your personal situation. Also this software has become easily accessible for SMEs via SAP.

- **Customer Relationship Management (CRM):**

CRM systems, such as those of Salesforce, help to create an overview of all customer interactions, and make predictions in customer behavior (e.g. how long it takes for a customer to respond). This prevents policy implementation purely from a gut feeling, which often is not sufficient enough to make a decision.



Conclusion

Eventually the core idea of AI uses a huge number of small step-by-step plans to simulate human skills. It is often used in multinationals, but it certainly shows its strengths within SMEs. Most SMEs are currently lagging behind in the deployment of AI within their company, which also means that stepping in early can lead to a major strategic competitive advantage. AI is getting more involved in the business processes every year. Therefore it is not pie in the sky, but already part of the daily business.