The what, how, where and why of AI

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Artificial intelligence (AI) technology is playing a vital role in transforming not only businesses, but entire industries, and even our day-to-day lives.

Gartner forecasts that worldwide AI software revenue is set to reach $62.5 billion this year, a fairly significant increase of 21.3 percent from 2021. However, the research company also states that, while enterprises continue to show strong interest in AI, the reality is that deployment is lagging behind, and it will take up to 2025 for half of organisations worldwide to reach the maturity model level Gartner describes as the 'stabilisation stage'.

The reasons for this? A reluctance to embrace AI and also a lack of trust, amongst others.

“Successful AI business outcomes will depend on the careful selection of use cases,” said Alys Woodward, Senior Research Director at Gartner. “Use cases that deliver significant business value, yet can be scaled to reduce risk, are critical to demonstrate the impact of AI investment to business stakeholders.”

So, while there's no debate that AI has serious value potential, it is important that businesses understand upfront what it is, current trends, and how it can be successfully adopted.

What is AI? Understanding the use cases for AI technologies correctly

AI encompasses several technologies. These include the following:

1. **Natural language processing (NLP)** – an area of AI where a computer is able to break down and understand spoken and written human language, encompassing chatbots, sentiment analysis, summarisation, entity recognition, translation, and concept extraction;

2. **Robotic process application (RPA)** – this technology aims to automate the more mundane, repetitive business processes, freeing up users to perform higher value work;

3. **Speech recognition** – AI speech recognition uses speech-to-text technology to convert voice to text. Also known as voice computing, text-to-speech allows you to convert written text into natural-sounding audio in a variety of languages and voices;

> All of this information reinforces the fact that a good understanding of what AI technologies are, and how they can be used most effectively, is critical for any company looking to positively influence operational efficiencies, gain competitive advantage, and ultimately improve business outcomes.

4. **Machine learning (ML)** – this area of AI sees machines using data and algorithms to mimic human learning, but without human intervention. By learning, machines are then able to identify patterns in data and predict outcomes. Important areas within ML include predictive analytics, forecasting, and anomaly detection; and

5. **Vision technologies** – here, AI is able to process and make sense of visual data, like images and videos, using video analytics and image recognition.

How do you take the right steps to implement AI effectively?

When it comes to AI at any level, the output requires clean data as input. This refers to data that has been cleansed, with corrupt information, inaccurate or irrelevant records and duplicated data replaced, modified or deleted. Without clean data, you won't get the right output.

What are the difficulties to avoid on an AI journey?

A major pitfall many organisations encounter when embarking on an AI journey is starting the project off too big and trying to accomplish everything at once; the key is to try and avoid undertaking too much, too soon. It's more prudent to tackle one area or challenge at a time, and gain immediate business value. Start small for bigger impact.

Where will AI be in five years' time?

AI will play a major role in catapulting us into the metaverse. In fact, we're already seeing AI building practical models in a virtual world. For instance, an architect can provide a building model using virtual reality that allows the opportunity to experience the scale, depth and design intent of the building within an immersive 3D experience, long before the structure is physically built. It's also possible to use AI for accurate weather forecasting, allowing meteorologists to predict future events such as rainfall, wind and temperature.

In addition, facial analysis is being used in job interviews to analyse potential candidates' facial expressions and their tone of voice to assess personality and job skills, although this has been a hotly debated topic globally.

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