

AI will have a real-world impact in 2021

 By [Dries Cronje](#)

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Artificial Intelligence (AI) is gaining notable momentum across a number of industries. In the past year, we saw rapid digital transformation spurred by Covid-19, with new technologies being adopted almost overnight. As we enter 2021, the same upward trajectory can be expected, as AI becomes an increasingly normal part of our daily lives.



Dries Cronje, founder of Deep Learning Café

Due to the impact of the pandemic, businesses still feel quite vulnerable, and many will be in recovery phases for the next few years. As a result, they will need to rely more heavily on AI technology to ensure smarter decisions are made.

In the past, many companies have dipped their toes into digital technologies such as automation and deep learning, but 2020 proved to be the year to dive headfirst. As a result, businesses implemented alternative and new solutions with years worth of innovation, in as little as five to six months. This year, we expect to see a solid expansion and development of the use of AI in important and meaningful ways in 2021 and beyond:

Further strides in science and mathematics

AI will have real-world impact in fighting against climate change, pollution and future viral pandemics and disease. Google's machine learning company DeepMind has solved what biologists call 'the protein-folding problem' using AI programme, AlphaFold2.

The programme solved the problem by determining the 3D shapes of proteins from its amino-acid sequence. AlphaFold2 will accelerate efforts of scientists to understand the building blocks of cells and enable quicker and more advanced medicine, research and bioengineering.

More AI at the edge

The new year will see our smart tech getting smarter. By combining AI with the Internet of Things (IoT), internet-connected devices will be able to learn from the data they collect. Systems can take actions on the data it monitors such as locking doors, redirecting traffic, reducing in-home air temperatures, and turning off lights. Alongside Siri and Alexa, IoT represents products loaded with software, sensors, and AI technology that serve a specific purpose.

Solving the social dilemma

As more documentaries such as Netflix's *Social Dilemma* bring to light the ethical concerns around the implementation of AI in social media, we should see a trend towards the use of AI for more inclusive, less bias, and ethical models.

As AI continues to grow in capability and availability, its ethical implications continue to demand our attention. For example, it is likely that the ethics around deepfake misinformation, AI for children, algorithmic bias, data protection and acceptable uses will all be up for necessary discussion in 2021.

Open models with bigger access

As larger companies such as Intel, Amazon and Google rapidly incorporate AI into their systems, we will see greater democratisation of the AI offerings for public use. This will make digital innovation more accessible for software developers and smaller businesses.

We've already seen many local organisations actively piloting AI within their existing business models, experimenting with a range of different technologies, such as chatbots, virtual assistants and image recognition.

From real-time decision making to reducing operating costs, AI can work together with employees to create solutions that will improve the way businesses work. This is the beginning of an exciting pathway of digitisation and innovation for South African companies across various industries.

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