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AI technologies improve inclusivity for people with disability

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As in many facets of our lives, artificial intelligence technologies are expected to make a huge impact on the lives of people living in disability.

The Australian Institute of Health and Welfare says one in six Australians are living with a disability, while the World Health Organisation estimates 16 per cent of the global population experiences significant disability.

However, many are still excluded from actively participating in the online world due to issues accessing digital content and services.

Recent research has shown AI is already making remarkable strides in

improving the quality of life for those with disabilities, more could be done to assist this vulnerable group.

Innovations in AI have led to significant advancements in accessible communication, adaptive learning and personalised support systems, allowing for greater independence and inclusion for people with disability.

At the heart of these advancements is Germany-based Stephanie Stoll's work on AI-powered sign language translation, which stands as a testament to the potential of this technology to bridge communication barriers for the deaf community.

Using realistic computer-generated models, Dr Stoll's AI can interpret spoken language into more than 300 sign languages using realistic computer-generated models, a pioneering step towards global inclusivity using newly

developed tech.

Interest in developing an AI-generated sign language model for the deaf community came after Dr Stoll started studying AI nearly a decade ago.

Before her work in sign language, Dr Stoll conducted her bachelor's dissertation on building a smart-hand prosthetic using computerisation after her aunt had a stroke and was left a quadriplegic.

The most well-known example of AI for many people is ChatGPT — and the company behind it, Open AI, is also investigating how to use the technology to assist the estimated 250 million people globally with vision impairment.

Be My Eyes aims to use ChatGPT's new ability to describe visuals, to help with

hundreds of daily tasks with an image-to-text tool: a person can take a photo of what's in front of them and the software will read aloud what's in the image.

Open AI is working on a Virtual Volunteer within an app which will offer the same level of context and understanding as a human. Closer to home, Curtin PhD candidate Jessica Wheadon is examining how large language models and AI chatbots such as ChatGPT can support people with autism to overcome some of the difficulties with social communication and social interaction common to the disorder.

Early research has shown people with autism have responded well to technology-based interventions such as chatbots.

These models allow people with autism to have

conversations discussing social scenarios, help make goals and provide feedback to help practise social interactions, just as if they had a person there helping them.

Given we are still learning how AI may be integrated into our lives — and the immense speed at which the technology is progressing — it is critical frameworks and legislation surrounding how we use these technologies are implemented.

However, the upside of AI's rapid advancements is we may not have to wait too long before people can benefit.

Alex Jenkins is the director of the Western Australian Data Science Innovation Hub at Curtin University. The hub will host a free demonstration of AI technologies featuring international experts including Dr Stoll and Ms Wheadon on April 3

from 4-6pm.