The Transformative Power of AI: Empowering People who are Blind.

Artificial Intelligence (AI) has become a part of our lives, transforming how we live and work. For people with disabilities, AI has been revolutionary in making the physical environment and workplace culture more inclusive and accessible. Inclusion isn't merely about compliance, it's about providing a level playing field that helps unlock the potential of disabled people. Business leaders have been able to improve workplace inclusion and accessibility with AI offering autonomy beyond the confines of the office place. Particularly, for people who are blind or have low vision, several innovative devices and services are available today, like voice assistants, navigation apps and AI Braille translators, that can empower them to contribute equally to society. Let's uncover some of the innovations that are shaping the future of people who are blind.

Independent living

Today, AI allows blind people to see and interact with their physical environment. We have smart glasses that can recognise objects, read texts, and even recognise faces, providing real-time information to users. Navigation apps powered by AI can help people who are blind or have low vision, navigate independently by providing directions, identifying obstacles, and alerting users to nearby live content. Smart canes equipped with intelligence are designed to detect problems and provide feedback to the user. These devices use sensors and AI to detect obstacles in the user's path and alert through vibration or hearing.

Communication: breaking barriers

Some devices use natural language processing techniques to convert on-screen text into speech, allowing users to navigate websites, documents, and applications. The AIHEARU[1] platform offers an open API that allows integration with popular communication platforms such as Zoom, or voice-assisted services like Siri, Alexa, and Google Assistant, expanding the market for many services like educational resources or entertainment for people who are blind and or have low vision.

AI also makes printed information accessible to those who are blind by improving Braille translation technology. Optical character recognition (OCR) combined with machine learning algorithms can convert printed text into Braille. Learning apps use AI to help people learn, tailor content to their needs and improve learning. eBraille is also a revolutionary application for making multilingual writing accessible (text-to-speech features which can convert any document into audio) through on-device note-taking and publishing capabilities.

The road ahead

[1] https://aihearu.com

However, the WHO estimates that more than 2.5 billion disabled people will need one or more assistive technologies in 2030. Almost a billion of them can't access these products. This is because of costs, infrastructure gaps, and even discrimination. Many technologies are still in nascent stages or poorly designed and lack training support. It's not just a matter of affordability, but a complex web of issues demanding a united effort from governments, NGOs, tech giants, and the disabled community itself to break down these barriers and create a truly inclusive future.

Nevertheless, AI has undeniably paved the way for people with disabilities, especially people who are blind and will continue to do so in the future. However, a significant accessibility gap remains, limiting its reach to a vast majority. Overcoming these barriers is imperative to ensure that assistive technology becomes accessible to everyone.