

PNT2022TMID28428

Real-Time Communication System Powered by AI for Specially Abled

Artificial Intelligence

B1-1M3E

Artificial intelligence (AI) refers to smart machines or algorithms that are capable of performing cognitive tasks usually made by humans. This includes different technology solutions that mimic humans and use logic from playing chess to solving equations. Machine learning is one of the technologies that is part of AI: when algorithms are exposed to more data, they can learn and improve from it in order to anticipate consumers' needs. For example, Google uses machine learning: its algorithms collect what Internet users searched and what they liked on social networks in order to provide more personalized search results and recommendations.

Nearly 4 billion people in the world use Google search engine, therefore AI, which is perceived as a social good. Anybody can have access to it including people with disabilities. Technology in general and artificial intelligence in particular have a key role in accessibility. It's not just about finding the latest innovations but mostly about providing a solution at the service of a category of people in order to improve their lives. This represents a major progress for over 1 billion disabled people in the world who could use AI. What can AI do towards accessibility?

It can remove accessibility barriers through different solutions:

- ⊗ Image recognition for people with a visual impairment,
- ⊗ Facial recognition for people with a visual impairment,
- ⊗ Lip-reading recognition for people with a hearing impairment,
- ⊗ Text summarization for people with a mental impairment,

⊗ Real-time captioning or translations for people with a hearing impairment or even people who don't speak the language.

AI has a huge impact on people with disabilities' everyday lives: a person with a mental impairment can easily comprehend the world around him thanks to text summarization. What may at first be a complicated message to decipher turns out to be an easy-to-understand text. Things that at first were difficult or impossible for them are now easily accessible on a daily basis. AI enables people with disabilities to step into a world where their difficulties are understood and taken into account. Technology adapts and helps transform the world into an inclusive place with artificial intelligence accessibility. There is a certain sense of equality as AI puts everybody, with or without disabilities, at the same level.