Commission for Accessibility
Meeting Minutes
Monday, June 12, 2023

Meeting Via Zoom

In Attendance: Christine Santori, Dave Choplinski, Maureen Culhane, Michael Landrigan, Tony Phillips, Don Ciota

Visitors: John Agni, Joe Ternullo, Avery Glass

Call to Order: 5:03 PM

Public Comment

(none)

Artificial Intelligence (AI) and Persons with Disabilities
Background
Possible Applicability for the Disabled

Artificial Intelligence has been a topic of much interest in the media. Tonight's meeting sought to introduce this subject to the Commission focusing on how such a technology may be applied now or in the future to persons with disabilities. This presentation went into the background, types of systems that are, or may be developed, and some practical applications. As this technology grows it is expected that new applications will be developed taking advantage of specific features that may be able to customize applications to specific needs of the individual resulting in optimal learning techniques and enabling more self-control of life functions. The goal of any new technology should be to enhance

lifestyle and encourage societal engagement, but not to reduce personal contact.

AI Definition and Applicability for the Disabled

. Alan Turing generally is credited with the origin of the concept when he speculated in 1950 about "thinking machines" that could reason at the level of a human being

Turing was followed up a few years later by John McCarthy, who first used the term "artificial intelligence" to denote machines that could think autonomously. He described the threshold as "getting a computer to do things which, when done by people, are said to involve intelligence."

Darrell M. West is a senior fellow in the Center for Technology Innovation within the Governance Studies program and a co-editor-in-chief of TechTank. :

As argued by John Allen and David M. West an April 2018 paper, such systems have three qualities that constitute the essence of artificial intelligence: intentionality, intelligence, and adaptability.

INTENTIONALITY

Artificial intelligence algorithms are designed to make decisions, often using real-time data. Using sensors, digital data, or remote inputs, they combine information from a variety of different sources, analyze the material instantly, and act on the insights derived from those data. As such, they are designed by humans with intentionality and reach conclusions based on their instant analysis.

Intelligence:

Machine learning takes data and looks for underlying trends. If it spots something that is relevant for a practical problem, software designers can take that knowledge and use it with data analytics to understand specific issues.

ADAPTABILITY

The last quality that marks AI systems is the ability to learn and adapt as they compile information and make decisions. Effective artificial intelligence must adjust as circumstances or conditions shift. This may involve alterations in financial situations, road conditions, environmental considerations, or military circumstances.

CONCLUSION

In short, there have been extraordinary advances in recent years in the ability of AI systems to incorporate intentionality, intelligence, and adaptability in their algorithms. AI software learns as it goes along and incorporates real-world experience in its decision making. In this way, it enhances human performance and augments people's capabilities.

AI can be leveraged to create a wide range of educational programs that benefit people with disabilities. Here are some examples:

1. Speech Recognition and Augmentation: AI-powered speech recognition systems can assist individuals with speech impairments by transcribing their spoken words into text. Additionally, text-to-speech technologies can be utilized to convert written content into spoken

words, aiding individuals with visual impairments or reading difficulties.

2. Personalized Learning: AI can be employed to develop adaptive learning platforms that cater to individual needs and preferences. These systems can analyze user data, including performance, learning styles, and challenges, to provide personalized recommendations, content, and interventions. This benefits individuals with various disabilities by offering tailored educational experiences.
3. Virtual Reality (VR) and Augmented Reality (AR): VR and AR technologies, coupled with AI, can create immersive and interactive learning environments. For instance, individuals with mobility impairments can explore virtual worlds, historical sites, or scientific simulations through VR, enhancing their educational experiences.
4. Intelligent Tutoring Systems: AI-powered tutoring systems can offer personalized instruction and feedback, aiding individuals with disabilities who require additional support. These systems can adapt to individual learning styles, provide step-by-step guidance, and address specific challenges, fostering a more inclusive learning environment.
5. Accessibility Tools: AI can facilitate the development of accessibility tools such as screen readers, image recognition software, and closed captioning systems. These tools improve access to educational materials for individuals with visual impairments, hearing impairments, or learning disabilities.
6. Natural Language Processing (NLP): NLP techniques can enable individuals with disabilities to interact with educational programs using natural language. This includes voice commands, text-based chatbots, or language processing interfaces, empowering individuals with communication or motor impairments.
7. Cognitive Assistance: AI can assist individuals with cognitive disabilities by providing memory aids, organization tools, and cognitive training programs. These applications can help individuals with attention deficit disorders, memory impairments, or cognitive processing difficulties to enhance their learning capabilities.

8. Emotional Support: AI-powered chatbots or virtual assistants can offer emotional support and guidance to individuals with disabilities. These systems can provide encouragement, motivation, and resources, fostering a supportive and inclusive learning environment.

It's important to note that while AI can be valuable in creating inclusive educational programs, it should be complemented with human support and consideration of individual needs and preferences.

How Can Artificial Intelligence (AI) assist persons with Disabilities?

Artificial Intelligence (AI) has the potential to greatly assist persons with disabilities in various ways. Here are some examples:

1. Assistive Communication: AI-powered systems can help individuals with speech impairments or conditions such as ALS (Amyotrophic Lateral Sclerosis) communicate more effectively. Through natural language processing and machine learning, AI can convert text or symbols into speech or vice versa. This enables people to communicate using alternative methods like text-to-speech devices, speech recognition software, or augmentative and alternative communication (AAC) systems.
2. Vision Assistance: AI can assist individuals with visual impairments by providing real-time image recognition and object detection. Using computer vision algorithms, AI can describe the environment, identify objects, and read text aloud using text-to-speech capabilities. This helps visually impaired individuals navigate their surroundings, read printed materials, and recognize faces.
3. Mobility Aids: AI can enhance mobility aids for individuals with physical disabilities. For example, AI-Powered wheelchairs can incorporate sensors, cameras, and machine learning algorithms to detect and avoid obstacles, plan efficient routes, and provide autonomous navigation. Similarly, AI can assist with prosthetics by enabling more intuitive control through brain-computer interfaces or advances sensors.
4. Accessibility Tools: AI can improve accessibility by automatically generating captions and transcripts for videos, making digital content more accessible

to individuals with hearing impairments. AI can also assist with web accessibility by identifying and suggesting improvements to make websites and applications more user-friendly for individuals with disabilities.

5. Cognitive Support: AI can provide cognitive support to individuals with cognitive disabilities, such as autism or cognitive impairments resulting from brain injuries. AI-based virtual assistants can offer reminders, schedule management, and assist with daily tasks, promoting independence and routine adherence. These systems can also incorporate personalized routines and adapt to user's preferences.
6. Personalized Healthcare: AI can contribute to personalized healthcare for individuals with disabilities. Machine learning algorithms can analyze large datasets and identify patterns to improve diagnoses, treatment plans, and monitoring of chronic conditions. AI can also facilitate remote healthcare delivery, enabling individuals to access medical services and consultations from their` homes.

A wide-ranging discussion about the personal reflections on actual and future applications of AI for the disabled by the Commissioners and guests occurred. It is anticipated more AI-related applications will be developed in the future as more sophisticated programming is developed.

Joe Ternullo, Chairman of the Commission for the Aging, was among our guests this evening. Joe described a program his commission is undertaking to survey town residents in order to study and co-ordinate the needs of the aging in our community. According to Joe, the definition of elderly is that of persons 60 years of age. He said while the population of Ridgefield is growing at the rate of 1% per year, the aging population is increasing by 3% per year. And by this definition, the aging represents 25% of the town's population. Don Ciota added if the statistical number of persons with disabilities were added, the 2 groups might approach 50% of the town population.

Joe told the Commission beginning in September monthly sounding-board meetings open to the public will be held at the library.

The Commission for Accessibility endorses these initiatives and will assist in these efforts.

Commissioner Christine Santori presented a short video on a new device, the *Evac-Chair*, which is a device to assist persons with mobility disabilities to be evacuated from a building with stairs in an emergency. This device was introduced and then adopted by the Greece, N.Y. Central School District having been promoted by Giana Bisnett, a high school freshman, who uses a mobility device. Kudos to her for her advocacy and to the district for their implementation.
A Happy Father's Day to all!

Adjourn. 6:05 PM

2023 Meeting Dates: (Mondays at 5:00PM)

Jul -- Aug-- Sep 11
Oct 16 Nov 13 Dec 11

Until further notice these meetings will continue via Zoom.

Minutes prepared by Don Ciota, Chairman