

Accessibility Guidelines for AI-powered Services and Models

Raja Kushalnagar

raja.kushalnagar@gallaudet.edu

School of Science, Technology, Accessibility, Mathematics and Public Health
Gallaudet University, 800 Florida Ave NE, Washington, DC, USA

ABSTRACT

Artificial Intelligence services are increasingly being used to provide accessibility for consumers with sensory disabilities in information and communication technologies. However, these AI-powered are only as good as the data they've been fed, which often reflects historical or current biases either in the collection of data or in the data itself. In general, people with diverse visual and auditory disabilities are not well-represented in these datasets because although many people have some disability, the number with any one disability is usually a small percentage of the population.

These disparities in representation can lead to disproportionate impacts of AI-powered services on people with disabilities, and though laws to protect people with disabilities exist, the evaluation of AI-based systems and the models they rely on, to comply with those laws in both the letter and spirit of the law are important, unsolved problems. We advocate for guidelines for an evaluation of the models used by AI-powered services that considers their fairness, accountability, transparency, in terms of use-cases, inclusiveness, and legal requirements for accessibility. These accessibility guidelines can be used by architects or developers of AI-powered services to ensure the services and underlying models are *fair* by being available to consumers with diverse sensory abilities, *accountable* by complying with legal requirements, and *transparent* by complying with both social and user expectations.