Expanding the Evidence Base

Expert Insights on AI and Disability

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The Intersection of Disability and Technology

- Technology can provide unique accessibility solutions for people with disabilities.
- Artificial Intelligence (AI) development has the potential to support accessibility.
- AI can also create risks of discrimination, privacy violations, and other harms.
- Focused research on disability and technology and AI needs attention.

Exploring AI Opportunities and Challenges

- Explore several different AI domains:
  - Transportation
  - Education
  - Employment
  - Healthcare
  - Assistive Technology
- Delphi method – 32 experts, statement agreement iterative study, dissent analysis of disagreed statement rationale

Research Findings

Consensus: Benefits of AI

- AI will improve wayfinding and sidewalk accessibility.
- Blind users may prefer AI for reading private material over a human reader, as long as information is not stored in the cloud.

Consensus: Accessibility Concerns

- AI coming to classrooms will not be fully accessible.
- AI literacy tools that use drag-and-drop interfaces are inaccessible for non-mouse users.
- Image generating tools are not fully accessible for blind users.

Consensus: Bias Concerns

- “Automation bias,” the belief that machines make fairer decisions than humans, is itself a bias that may lead to over-trust of AI systems.
- AI systems may discriminate against people with disabilities because they are not “average” with harmful impacts on employment and healthcare access.

Consensus: Need Oversight & Transparency

- A human should review automated hiring decisions.
- When employers use AI for screening, this should be disclosed to all job applicants.
- AI should partner with, not replace, human educators.
- AI auditing must account for anti-disabled biases separately from gender and racial biases.

Consensus: Need Disabled Involvement

- People with disabilities should be involved in all aspects of AI development, deployment, and policymaking.
- There should be better disability representation in the tech field.
- There should be strong federal AI privacy laws informed by people with disabilities.

Consensus: Need for Regulations

- AI regulations should be proactive, informed by the disability community, and specifically protect the rights and privacy of people with disabilities.

Diverging Opinions

AVs

- Some experts were optimistic that autonomous vehicles (AVs) will soon offer unparalleled transportation flexibility to non-drivers with disabilities.
- Others cautioned that expenses, technological limitations, and safety concerns will delay or prevent the widespread adoption of AVs.

AI will benefit workers with disabilities

- The experts disagreed on whether AI will increase productivity and inclusion for workers with disabilities.
- While AI may help surmount some workplace access barriers, some experts pointed out that physical and attitudinal barriers are likely to persist regardless of AI adoption.

Guiding Principles

AI Principles: When to Scrutinize

- When AI has a significant impact on people's civil rights, health, safety, freedom, or opportunity, both deployers and developers have an obligation to ensure that the AI models in use are not discriminatory, either intentionally or unintentionally.
- AI systems should be designed and audited to ensure that they do not amplify harmful stigmas about people with disabilities.

AI Principles: Training Data Quality

- Producers of AI training datasets should evaluate whether their datasets represent a sufficiently diverse range of people with disabilities, including diverse disability types and people with intersecting identities, and modify their datasets accordingly.

AI Principles: Nothing About Us

- AI developers should actively recruit people with disabilities into their workplaces, and AI workplaces should be fully accessible. This includes ensuring that AI programming and training tools are accessible and that there are accessible avenues for people with disabilities to learn AI skills.

AI Principles: Accessible First

- AI software should fully conform with international accessibility standards, such as the Web Content Accessibility Guidelines 2.2, Level A and AA.
- The use of AI in software and decision-making tools should be clearly disclosed to people impacted. Impacted people should understand how to request reasonable accommodations or how to appeal decisions to a human reviewer.

AI Principles: Education

- AI should not entirely replace human educators when delivering instruction or developing educational plans for students with disabilities.
- Students and employees with disabilities should be able to use AI as assistive technology.

AI Principles: Privacy

- When using AI with sensitive or private information, users should be able to choose where the information is stored and who can access it.
- For the full list of Guiding Principles for more inclusive AI, visit afb.org/AIResearch.

Cross-Disability User Survey

Study 2 – You Can Participate

- We have another week in this data collection, so please share your ideas: afb.org/AISurvey.

Emerging Trends

- 92% of people learned AI by playing around with AI tools
- 57% would like to have instructional videos or podcasts, 13% have tried tools and found them inaccessible (not disaggregated by disability)
- Top 3 uses for voice AI – searching, sending messages, routines
- It's important to develop AVs 34% somewhat important +33% Very
- 96% of people think good public transportation is important, and AI will improve public transportation
- In job searches, computer-based tests were the most common 88%, with 44% being video interviewed by a computer and 41% taking gamified employment tests

Future Analysis

- Comparing the experiences of disabled and non-disabled users
- Exploring disability specific applications of AI
- Qualitative analysis of real harms experienced by users to date
- Qualitative exploration of user hopes for future AI solutions
- For inquiries about data analysis that pertains to your specific company, contact Director of Research, Arielle Silverman asilverman@afb.org

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Thank You!

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