

# Exploring the Ethics of Digital Accessibility

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Digital accessibility is a critical ethical consideration in programmatic development. In this paper, digital accessibility will be defined, disability demographics will be revealed, accessible considerations for present and ongoing efforts, forecasts and implications of implementing digital web accessibility practices for present and future generations will be explored.

Digital accessibility, is defined as “the inclusive practice of removing barriers that prevent interaction with, or access to websites, digital tools and technologies, by people with disabilities.”<sup>1</sup> “Approximately 1.2 billion people around the world have a disability.”<sup>2</sup> The CDC recognizes disabled individuals as those who experience visual, auditory, speech, mobility and or cognitive obstacles.

Many tools have been created to increase accessibility and enhance the digital experience of individuals with disabilities. “Computer operating systems have been developed to enable individuals with low vision to see computer displays by adjusting color schemes, contrast settings, and font sizes. In addition, operating systems have been developed to enable, “individuals with limited manual dexterity to move a mouse pointer using keystrokes instead of a standard mouse and assistive technology devices such as screen readers, text enlargement software, and computer programs have been designed to increase accessibility for individuals with disabilities.”<sup>3</sup>

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<sup>1</sup> <https://www.law.georgetown.edu/your-life-career/campus-services/information-systems-technology/digital-accessibility/>

<sup>2</sup> <https://www.pewresearch.org/fact-tank/2021/09/10/americans-with-disabilities-less-likely-than-those-without-to-own-some-digital-devices/>

<sup>3</sup> <https://archive.ada.gov/pccatoolkit/chap5toolkit.htm>

While the impressive efforts of social media companies are making efforts to experiment with artificial intelligence and other companies are electing to expand their screen-reading software and mobile apps, to help the visually impaired use their platforms,”<sup>4</sup> it is imperative to note that, “of the 5.4 billion searches conducted via Google’s search engine, only 2% of all websites are accessible.”<sup>5</sup>

Digital accessibility is the process of designing digital products for individuals that make products and experiences on digital platforms experiences, inclusive and accessible for all. Industries, businesses (private and public), educational institutions that circumvent the inclusion of accessible aspects in their websites, alienate and create unforeseen barriers for site visitors. Said barriers can impact revenue streams and present themselves vulnerable to legal challenges. While advances are being made in incorporating accessible features into websites and digital platforms, “poorly designed websites can create unnecessary barriers for people with disabilities, just as poorly designed buildings prevent some people with disabilities from entering. Access problems often occur because website designers mistakenly assume that everyone sees and accesses a web page in the same way and this mistaken assumption often results in inadvertently creating barriers of access for individuals with disabilities and assistive technologies users.”<sup>6</sup>

Advocates for individuals with disabilities suggest that, “many companies don’t give priority to accessibility when they design new products and features, a decision that has led to a growth in lawsuits over the claim that some websites are not accessible to those with disabilities.”<sup>7</sup> The number of U.S. lawsuits alleging that websites, apps and

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<sup>4</sup> <https://www.techtimes.com/articles/261437/20210614/accessibes-search-engine-accessfind-is-launched-to-help-those-with-disabilities-find-accessible-websites.htm>

<sup>5</sup> <https://www.techtimes.com/articles/261437/20210614/accessibes-search-engine-accessfind-is-launched-to-help-those-with-disabilities-find-accessible-websites.htm>

<sup>6</sup> <https://archive.ada.gov/pcatoolkit/chap5toolkit.htm>

<sup>7</sup> <https://www.wsj.com/articles/lawsuits-over-digital-accessibility-for-people-with-disabilities-are-rising-11626369056>

digital videos were inaccessible to people with disabilities rose 64% in the first half of 2021 from a year earlier, Plaintiffs filed 1,661 lawsuits claiming digital violations of either the federal Americans with Disabilities Act or California's Unruh Civil Rights Act between Jan. 1 and June 30, up from 1,012 in the comparable period of 2020, according to the report by UsableNet Inc., a technology firm that offers accessibility-compliance technology and services. UsableNet, reports that digital accessibility lawsuits have risen steadily, to about 3,500 in 2020 from roughly 2,900 in 2019 and about 2,300 in 2018. In addition, e-commerce companies are sued most often, followed by digital media finance, food service and healthcare agencies; with a growing trend that targets companies with revenue below \$50 million.”<sup>8</sup>

According to Jason Taylor, chief innovation strategist at UsableNet, “Unlike accessibility regulations for the physical world, there is no clear framework for violations on the internet.” Even though there are accessibility standards and guidelines to follow for websites and web applications, in the U.S. there are no formal laws to enforce them. This is because Title III of the ADA does not define “public accommodation” to include websites.”<sup>9</sup> Furthermore, Peter Shapiro, partner and Northeast regional vice-chair of labor and employment practice at law firm Lewis Brisbois Bisgaard & Smith LL added, “Companies can end up being sued over accessibility despite their efforts, and the current situation is very perilous for businesses—they don’t know whether they comply.”<sup>10</sup> Interestingly in the very same article, it is noted that, “some advocates say that litigation isn’t always the best approach, and while lawsuits cause businesses and organization to acknowledge the need for the inclusion of accessibility, the lawsuits can

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<sup>8</sup> <https://www.wsj.com/articles/lawsuits-over-digital-accessibility-for-people-with-disabilities-are-rising-11626369056>

<sup>9</sup> <https://www.searchenginejournal.com/website-accessibility-law/285199/#close>

<sup>10</sup> <https://www.wsj.com/articles/lawsuits-over-digital-accessibility-for-people-with-disabilities-are-rising-11626369056>

sometimes force organizations to recognize the importance of digital accessibility, said Lainey Feingold, a disability-rights lawyer and author.”<sup>11</sup>

In addition to a growth in lawsuits, “research undertaken by UserWay, a leader in website accessibility automation, has identified that e-commerce retailers stand to lose an estimated \$828 million in revenue during the 2021 Christmas holiday as a result of poor website accessibility. In the U.S alone, one in four adults have some form of disability but risk being locked out of equitable access to goods and services online due to owners of digital products failing to code their websites appropriately to meet standards such as the Web Content Accessibility Guidelines (WCAG 2.1).”<sup>12</sup>

Common problems with web design are Images without alt text equivalents, documents posted in an inaccessible format, color specification, contracts and font sizes, the inclusion of video and media that lack accessibility features, distracting features without a static component and the non or under utilization of accessible coding in website development.<sup>13</sup>

While there are many tools on the market such as Chrome Lens an accessibility tool made for visually impaired individuals that has filters to aid an individual who is color blind to experience a website, website audio scanners and trackers to help with keyboard navigation, and screen readers for the visually impaired, “present site session trackers and analytics software cannot determine whether sites are left due to poor screen reader access,” auditory, motor, dyslexic and or cognitive navigation obstacles; inclusive of “those who may not even identify as having a disability but possess milder age-related impairments and simply lack a degree of digital fluency and thus site

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<sup>11</sup> <https://www.wsj.com/articles/lawsuits-over-digital-accessibility-for-people-with-disabilities-are-rising-11626369056>

<sup>12</sup> <https://www.forbes.com/sites/gusalexiou/2021/12/19/retailers-to-lose-828-million-of-sales-over-christmas-due-to-inaccessible-websites/?sh=2560256135b5>

<sup>13</sup> <https://www.accessiblemetrics.com/blog/top-8-most-common-accessibility-issues-to-avoid-and-solve/>

abandonment just abandonment just reads through as another bounce.”<sup>14</sup>

Commenting on the research, UserWay’s CEO Allon Mason said, “It is time we reframe digital accessibility as an all-out business requirement and not a compliance burden. Every company in the U.S. should prioritize accessibility and inclusion throughout every aspect of their business, including online. Digital accessibility improves the entire user experience - improving accessibility for some usually improves the experience for all. We encourage companies to develop their accessibility tools to ensure all people have access to all services.”<sup>15</sup>

“At some point in their lives, most people will either have a disability or know someone who has one, said Coleen Boyle, Ph.D., director of CDC’s National Center on Birth Defects and Developmental Disabilities. Learning more about people with disabilities in the United States can help us better understand and meet their health needs.”<sup>16</sup>

Digital inclusion through the incorporation and development of accessibility features is a vital necessity for ethical access. Websites and digital technologies serve as platforms that cultivate local and global relationships; through providing content that engages, connects and informs its audiences. Whether to entertain, educate, or generate revenue through offered services or products; accessible websites are essential to ensuring ethical and equitable access for all.

While, “achieving digital accessibility does not have a quick fix it necessitates a continued process of education and engagement.”<sup>17</sup> As educators it is imperative that

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<sup>14</sup> <https://www.forbes.com/sites/gusalexiou/2021/12/19/retailers-to-lose-828-million-of-sales-over-christmas-due-to-inaccessible-websites/?sh=2560256135b5>

<sup>15</sup> <https://www.forbes.com/sites/gusalexiou/2021/12/19/retailers-to-lose-828-million-of-sales-over-christmas-due-to-inaccessible-websites/?sh=2560256135b5>

<sup>16</sup> <https://www.forbes.com/sites/gusalexiou/2021/12/19/retailers-to-lose-828-million-of-sales-over-christmas-due-to-inaccessible-websites/?sh=2560256135b5>

<sup>17</sup> <https://www.forbes.com/sites/gusalexiou/2021/12/19/retailers-to-lose-828-million-of-sales-over-christmas-due-to-inaccessible-websites/?sh=2560256135b5>

computer science education includes instruction that engages and prepares students for academic growth through incorporating career readiness strategies that include a diverse range of ethical discussions and practical applications to equip students with tools that include and reflect ethical and equitable components and considerations in their present and future innovative contributions to the field of computer science.

“Web accessibility is the practice of making digital content accessible to people with disabilities and by extension, to everyone. The UN World Report on Disability 2011 estimated that about 15% of the world’s population is living with some form of disability. That’s about 1.3 billion people. These staggering numbers show that it is not only a moral responsibility to make websites accessible and compliant with the W3C’s Web Content Accessibility Guidelines (WCAG) standards.”<sup>18</sup>

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<sup>18</sup> <https://www.law.georgetown.edu/your-life-career/campus-services/information-systems-technology/digital-accessibility/>

## RESOURCES:

(WAI), W3C Web Accessibility Initiative. "Introduction to Web Accessibility" *Web Accessibility Initiative (WAI)*, W3C, [www.w3.org/WAI/fundamentals/accessibility-intro/](http://www.w3.org/WAI/fundamentals/accessibility-intro/).

"Ada Digital Accessibility lawsuits - F.HUBSPOTUSERCONTENT30.NET." *Www.usablenet.com*, UsableNet, [f.hubspotusercontent30.net/hubfs/3280432/Remediated%20-%202021\\_MidYear\\_UsableNet\\_WebAccessibilityLawsuit\\_Report\\_FINAL\\_06292021%20\(5\).pdf](https://f.hubspotusercontent30.net/hubfs/3280432/Remediated%20-%202021_MidYear_UsableNet_WebAccessibilityLawsuit_Report_FINAL_06292021%20(5).pdf).

Alexiou, Gus. "Retailers to Lose \$828 Million of Sales over Christmas Due to Inaccessible Websites." *Forbes*, Forbes Magazine, 20 Dec. 2021, [www.forbes.com/sites/gusalexiou/2021/12/19/retailers-to-lose-828-million-of-sales-over-christmas-due-to-inaccessible-websites/?sh=2560256135b5](https://www.forbes.com/sites/gusalexiou/2021/12/19/retailers-to-lose-828-million-of-sales-over-christmas-due-to-inaccessible-websites/?sh=2560256135b5).

Alexiou, Gus. "Understanding the Specific Web Accessibility Requirements of Older 'Silver Surfers'." *Forbes*, Forbes Magazine, 20 July 2021, [www.forbes.com/sites/gusalexiou/2021/07/20/understanding-the-specific-web-accessibility-requirements-of-older-silver-surfers/?sh=300841f07f25](https://www.forbes.com/sites/gusalexiou/2021/07/20/understanding-the-specific-web-accessibility-requirements-of-older-silver-surfers/?sh=300841f07f25).

Berg, Kim Krause. "Website Accessibility & the Law: Why Your Website Must Be Compliant." *Search Engine Journal*, 13 Oct. 2021, [www.searchenginejournal.com/website-accessibility-law/285199/#close](https://www.searchenginejournal.com/website-accessibility-law/285199/#close).

Bureau, US Census. "Anniversary of Americans with Disabilities Act: July 26, 2020." *Census.gov*, 8 Oct. 2021, [www.census.gov/newsroom/facts-for-features/2020/disabilities-act.html](https://www.census.gov/newsroom/facts-for-features/2020/disabilities-act.html).

"CDC: 1 in 4 US Adults Live with a Disability." *Centers for Disease Control and Prevention*, Centers for Disease Control and Prevention, 16 Aug. 2018, [www.cdc.gov/media/releases/2018/p0816-disability.html#:~:text=One%20in%204%20U.S.%20adults,affects%201%20in%207%20adults](https://www.cdc.gov/media/releases/2018/p0816-disability.html#:~:text=One%20in%204%20U.S.%20adults,affects%201%20in%207%20adults).

Forrester. "What's Wrong with Quick-Fix Products for Digital Accessibility?" *Forbes*, Forbes Magazine, 27 May 2021, [www.forbes.com/sites/forrester/2021/05/27/whats-wrong-with-quick-fix-products-for-digital-accessibility/?sh=718918f0681d](https://www.forbes.com/sites/forrester/2021/05/27/whats-wrong-with-quick-fix-products-for-digital-accessibility/?sh=718918f0681d).

Gartland, Sara, et al. "The State of Web Accessibility for People with Cognitive Disabilities: A Rapid Evidence Assessment." *Behavioral Sciences (Basel, Switzerland)*, U.S. National Library of Medicine, 26 Jan. 2022, [www.ncbi.nlm.nih.gov/pmc/articles/PMC8869505/](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8869505/).

Hamilton, Ernest. "Accessibe's Search Engine Accessfind Is Launched to Help Those with Disabilities Find Accessible Websites." *Tech Times*, 14 June 2021, [www.techtimes.com/articles/261437/20210614/accessibes-search-engine-accessfind-is-launched-to-help-those-with-disabilities-find-accessible-websites.htm](https://www.techtimes.com/articles/261437/20210614/accessibes-search-engine-accessfind-is-launched-to-help-those-with-disabilities-find-accessible-websites.htm).

Hoel, Rick. "Lack of Accessibility Can Create Long Term Impact on People with Disabilities." *Accessibility.com: Empowering Digital Accessibility for Businesses*, 18 Dec. 2020, [www.accessibility.com/blog/lack-of-accessibility-can-create-long-term-impact-on-people-with-disabilities](https://www.accessibility.com/blog/lack-of-accessibility-can-create-long-term-impact-on-people-with-disabilities).

"The Law on Website and Mobile Accessibility Continues to Grow at a Glacial Pace Even as Lawsuit Numbers Reach All-Time Highs." *Americanbar.org*, American Bar Association, 1 Jan. 2022, [www.americanbar.org/groups/law\\_practice/publications/law\\_practice\\_magazine/2022/jf22/vu-launey-egan/](https://www.americanbar.org/groups/law_practice/publications/law_practice_magazine/2022/jf22/vu-launey-egan/).

Low, Cherlynn. "Accessibility in Tech Improved in 2020, but More Must Be Done." *Engadget*, Engadget, 23 Dec. 2020, 10:00am, [www.engadget.com/accessibility-in-tech-2020-150002855.html](http://www.engadget.com/accessibility-in-tech-2020-150002855.html).

Morris, Amanda. "For Blind Internet Users, the Fix Can Be Worse than the Flaws." *The New York Times*, The New York Times, 13 July 2022, [www.nytimes.com/2022/07/13/technology/ai-web-accessibility.html](http://www.nytimes.com/2022/07/13/technology/ai-web-accessibility.html).

Patrizio, Andy. "What Is Digital Accessibility?" *WhatIs.com*, TechTarget, 7 July 2022, [www.techtarget.com/whatis/definition/digital-accessibility](http://www.techtarget.com/whatis/definition/digital-accessibility).

"Using AI to Improve Photo Descriptions for People Who Are Blind and Visually Impaired." *Meta*, 2 Nov. 2021, [about.fb.com/news/2021/01/using-ai-to-improve-photo-descriptions-for-blind-and-visually-impaired-people/](https://about.fb.com/news/2021/01/using-ai-to-improve-photo-descriptions-for-blind-and-visually-impaired-people/).