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** All references are listed remove before submitting

References

Byrne-Harber, S. (2021). *Giving a damn about accessibility: A candid and practical handbook for designers.* UX Collective. https://www.accessibility.uxdesign.cc/

Deque Systems. (2021). *Developing axe-core rules* [original-date: 2015-06-10T15:26:45Z]. Retrieved 02/18/2023, from https://github.com/dequelabs/axe-core/blob/develop/doc/rule-development.md

Germano, R. S., & Frango Silveira, I. (2022). WCAG-Easy Tool : A tool based in the WCAG to learn web accessibility. *2022 17th Iberian Conference on Information Systems and Technologies (CISTI), Information Systems and Technologies (CISTI), 2022 17th Iberian Conference on*, 1–6. https://doi.org/10.23919/CISTI54924.2022.9820012

Henry, S. L., Abou-Zahra, S., & Brewer, J. (2014). The role of accessibility in a universal web, 1–4. https://doi.org/10.1145/2596695.2596719

Hinz, K. (2016). *Designing for Accessibility: The Ultimate in UX*. Retrieved 12/26/2022, from https://medium.com/tealmedia/designing-for-accessibility-the-ultimate-in-ux-e366165d0db7

Horton, S., & Quesenbery, W. (2013). *A web for everyone: Designing accessible user experiences*. Rosenfeld Media OCLC: ocn871042774.

Initiative (WAI). (2022). *Introduction to Web Accessibility*. Web Accessibility Initiative (WAI). Retrieved 12/26/2022, from https://www.w3.org/WAI/fundamentals/accessibility-intro/

Initiative (WAI), W. W. A. (N.d.-a). *Accessibility Conformance Testing (ACT) Overview*. Retrieved 02/18/2023, from %5Curl%7Bhttps://www.w3.org/WAI/standards-guidelines/act/%7D

Initiative (WAI), W. W. A. (N.d.-b). Selecting Web Accessibility Evaluation Tools [ZSCC: NoCitationData[s0]]. Retrieved 02/25/2023, from https://www.w3.org/WAI/test-evaluate/tools/selecting/

Interaction Design Foundation. (N.d.). *What is Accessibility?* The Interaction Design Foundation. Retrieved 12/26/2022, from https://www.interaction-design.org/literature/topics/accessibility

Ismailova, R., & Inal, Y. (2022). Comparison of Online Accessibility Evaluation Tools: An Analysis of Tool Effectiveness. *IEEE Access, Access, IEEE*, 10, 58233–58239. https://doi.org/10.1109/ACCESS.2022.3179375

Kramer, N. (2018). *A Primer to Web Accessibility for Designers*. Medium. Retrieved 12/26/2022, from https://uxplanet.org/a-primer-to-web-accessibility-for-designers-2c548448c612

Rybin Koob, A., Ibacache Oliva, K. S., Williamson, M., Lamont-Manfre, M., Hugen, A., & Dickerson, A. (2022). Tech Tools in Pandemic-Transformed Information Literacy Instruction: Pushing for Digital Accessibility. *Information Technology & Libraries*, 41(4), 1–32. https://doi.org/10.6017/ital.v41i4.15383

Sane, P. (2021). A brief survey of current software engineering practices in continuous integration and automated accessibility testing. *2021 Sixth International Conference on Wireless Communications, Signal Processing and Networking (WiSPNET)*. https://doi.org/10.1109/wispnet51692.2021.9419464

Thornton, M., Mushtare, R., Rescigno, F., & Brightman, K. (2022). Accessibility of the Affordable Care Act (ACA) marketplace websites. *Journal of Communication in Healthcare*, 15(4), 316–323. https://doi.org/10.1080/17538068.2022.2046899

WebAIM. (2019). https://webaim.org/articles/tools/

Wikipedia. (2022). Accessibility. In *Wikipedia*. Retrieved 12/26/2022, from https://en.wikipedia.org/w/index.php?title=Accessibility&oldid=1124028549
Page Version ID: 1124028549

World Health Organization. (2022). *Disability*. World Health Organisation. Retrieved 12/26/2022, from https://www.who.int/news-room/fact-sheets/detail/disability-and-health

World Health Organization & World Bank. (2011). World report on disability 2011. Retrieved 12/26/2022, from https://apps.who.int/iris/handle/10665/44575

World Wide Web Consortium. (1997). *World Wide Web Consortium Launches International Program Office for Web Accessibility Initiative*. Retrieved 12/26/2022, from https://www.w3.org/Press/IPO-announce

World Wide Web Consortium. (2019). *Accessibility Conformance Testing (ACT) Rules Format 1.0*. Retrieved 02/18/2023, from https://www.w3.org/TR/act-rules-format/