

User Science Journal Accessibility Analysis

Posted by Katerina Plushko on May 12, 2019

The following is a report on the accessibility of this particular User Science Journal and a review of some of the issues I discovered when running it through both the Lighthouse Chrome dev tool and the WAVE web accessibility evaluation tool.

The Audit

At the time of this writing, my index.html home page had not been updated much from the original template provided, but upon analysis showed that it needed some basic accessibility improvements.

I ran an audit on it using the Chrome DevTools Lighthouse analysis tool, which brought up a 78% accessibility grade for my page with to primary issues impacting the score

1. **Background and foreground colors do not have a sufficient contrast ratio.** Pointing out the low contrast of the text "Posted by" and "on date" which can be an issue for most users, especially ones with low vision.

The image shows a side-by-side comparison of a web page and its Lighthouse accessibility audit results. On the left is a preview of the 'Katerina Plushko Journal' website. The page has a dark header with the title 'Journal' and subtitle 'Reflections on Accessibility and Analytics'. Below the header is a section titled 'Kittens' and another titled 'Blogging about Design'. A red speech bubble points to the 'Posted by' text in the footer of the 'Blogging about Design' section, stating 'Lighthouse pointing out a contrast issue'. On the right is the Lighthouse audit interface. The 'Accessibility' tab is selected, showing a score of 78%. Under the 'Contrast' section, there is a list of failing elements. The first item is '1 Background and foreground colors do not have a sufficient contrast ratio.' with a red triangle icon. Below this, it says 'Low-contrast text is difficult or impossible for many users to read. Learn more.' and 'Failing Elements'. The failing element is 'p.post-meta' with the HTML snippet '<p class="post-meta">Posted by Katerina Plushko on April 1, 2019</p>'. Below this, there is a section for 'Names and labels' with item '2 Links do not have a discernible name'.

2. **Links do not have a discernible name.** Pointing out the social media links for Twitter, Facebook and GitHub were missing link text, the lack of which can cause confusion for keyboard and screen reader users.




The image shows a web page snippet on the left and its Lighthouse audit results on the right. The web page has a header with the text "Kittens", a main heading "Blogging about Design", a subheading "Excited to share my thoughts and findings", and a byline "Posted by Katerina Plushko on April 1, 2019". Below this is a row of three social media icons: Twitter, Facebook, and GitHub. A green arrow points to the Facebook icon, which has a small tooltip showing "a 66.66 125.6". The Lighthouse audit results on the right show a "Names and labels" section with a warning icon and the message "Links do not have a discernible name". It explains that link text should be discernible, unique, and focusable. Below this, the "Failing Elements" section shows a table with one entry: a link with an empty href attribute. The table also shows the raw HTML for the failing element, which is a link with a span containing social media icons. At the bottom, there is a summary of audits: "Additional items to manually check" (11 audits), "Passed audits" (12 audits), and "Not applicable" (21 audits).

Kittens

Blogging about Design

Excited to share my thoughts and findings

Posted by Katerina Plushko on April 1, 2019

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Names and labels

These are opportunities to improve the semantics of the controls in your application. This may enhance the experience for users of assistive technology, like a screen reader.

2 Links do not have a discernible name

Link text (and alternate text for images, when used as links) that is discernible, unique, and focusable improves the navigation experience for screen reader users. [Learn more](#)

Failing Elements

a

[a](#)

 <i class="fas fa-circle fa-stack-2x"> </i> <i class="fab fa-facebook-f fa-stack-1x fa-inverse"> </i>

Additional items to manually check 11 audits

Passed audits 12 audits

Not applicable 21 audits

I also audited the Post 4 page of my user science journal. This page received a slightly higher score of 88 on the Lighthouse auditing tool due to the contrast issue mentioned above not being an issue but there were a few additional items pointed out by the WAVE tool.

3. **Linked image missing alternative text.** Which pointed out that the image I had posted had no alt text describing the image, which makes it impossible for the screen reader to describe the image to the user.

WAVE
web accessibility evaluation tool

http://www.katplush.com/user-sci-jou

Styles No Styles Contrast

Documentation

Errors

Linked image missing alternative text

What It Means
An image without alternative text results in an empty link.

Why It Matters
Images that are the only thing within a link must have descriptive alternative text. If an image is within a link that contains no text and that image does not provide alternative text, a screen reader has no content to present to the user regarding the function of the link.

How to Fix It
Add appropriate alternative text that presents the content of the image and/or the function of the link.

The Algorithm... in English
An image without alternative text (missing alt attribute or an alt value that is null/empty or only space characters) is within a link that contains no text and no images with alternative text.

Standards and Guidelines

- Section 508 (a)
- 1.1.1 Non-text Content (Level A)
- 2.4.4 Link Purpose (In Context) (Level A)

[Icon Index](#)

Buenos Aires
Argentina
FEELS 71° 22°
\$1,232 / mo

Taipei
Taiwan
FEELS 82° 49°
\$1,861 / mo

Lisbon
Portugal
FEELS 80° 41°
\$1,945 / mo

Seoul
South Korea
FEELS 17°
\$1,552 / mo

Budapest
Hungary
FEELS 34°
\$1,552 / mo

English (语言) USD — \$ °F

Nomad List Mobile Homepage

Linked image missing alternative text
An image without alternative text results in an empty link.
[More Information](#)

4. **Skipped heading level.** This error pointed out that my last heading was labeled with an "h4" tag when the preceding heading was an "h2" tag. This can cause confusion for users when navigating using keyboard assistive technology.

WAVE
web accessibility evaluation tool

http://www.katplush.com/user-sci-jou

Styles No Styles Contrast

Documentation

Alerts

Skipped heading level

What It Means
A heading level is skipped.

Why It Matters
Headings provide document structure and facilitate keyboard navigation by users of assistive technology. These users may be confused or experience difficulty navigating when heading levels are skipped.

How to Fix It
Restructure the document headings to ensure that heading levels are not skipped.

The Algorithm... in English
A heading level is skipped (e.g., an <h1> is followed by an <h3>, with no intermediate <h2>). Note that an <h1> is not required to be the first heading within the document.

Standards and Guidelines

- Section 508 (a)
- 1.3.1 Info and Relationships (Level A)
- 2.4.1 Bypass Blocks (Level A)
- 2.4.6 Headings and Labels (Level AA)

[Icon Index](#)

Suggested improvements based on user testing of Nomad List mobile site:

1. Add the same tagline to the homepage view that comes up on the desktop application to help with questions concerning the sites purpose.
2. Add an info pop up "on press" for the scale listed on the map feature that explains the scale and range.
3. Add a home for easy access to the home screen and refresh of the page.



Over all the issues listed above are not difficult to fix but can be easily overlooked when a developer is either rushed or simply unaware.

The Fix

Listed below are the solutions to the issues listed above:

1. For the contrast issue, I found the .post-meta class in the CSS file and changed the text color from light gray to black, increasing the contrast to meet accessibility guidelines.
2. For the social media links, I added URLs and aria-labels that advise what will happen if the link is clicked. For example, the aria-label for the GitHub icon says, "go to Katerina's GitHub".
3. For the missing Alt text on the image on Post 4, I added a description of what the image is.
4. For the skipped heading level, I opted to change the heading tag to a "P" tag and bold the line instead of changing to a "h3" tag, thought the h3 tag could have been manipulated in the CSS file if I still wanted to use a heading tag and have it standout.

Once these changes were completed, I reran both the homepage and the Post 4 page through both the Lighthouse audit and the WAVE tool. The Lighthouse audit gave both pages a score of 100 for accessibility and listed no additional warnings. The Wave tool, which was previously returning 4 errors, was now returning none. All of these fixes took less than 5 minutes to complete, showing that it doesn't take much to improve much.