

# Accessibility for Everyone

Beth Tucker Long

# Beth Tucker Long

- PHP Developer
- Stay-at-home Mom
- User Group Leader
- Mentor
- OSMI volunteer



# Open Sourcing Mental Illness

<http://OSMIHelp.org>

- Handbooks to help improve workplaces
- Research
- Resources



# Find Me

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@e3betht

Joind.in

<https://joind.in/talk/544ce>





# WHAT IS ACCESSIBILITY?

# What is Accessibility?

The measure of a web page's usability by persons with one or more disabilities.

--Usability.gov

<https://www.usability.gov/what-and-why/glossary/accessibility.html>

# What is Accessibility?

- Improving your usability
  - Following government mandates
  - Improve customer satisfaction
  - Increase customer diversity
  - Be fair
- 
- Widening your audience

# How much bigger?

The United Nations estimates:

- 15% of the world's population has a disability

[https://www.who.int/disabilities/world\\_report/2011/report/en/](https://www.who.int/disabilities/world_report/2011/report/en/)

<https://unstats.un.org/unsd/demographic-social/sconcerns/disability/statistics/#/countries>

# All Age Issue

## Regardless of age, disabled Americans are adopting tech at lower rates

*% of U.S. adults who say they have ...*

	Ages 65+			Ages 18-64		
	Any disability	No disability	Diff	Any disability	No disability	Diff
<b>Desktop/laptop computer</b>	50	66	<b>-16</b>	67	84	<b>-17</b>
<b>Smartphone</b>	32	45	<b>-13</b>	70	87	<b>-17</b>
<b>Home broadband</b>	36	57	<b>-21</b>	66	80	<b>-14</b>
<b>Tablet</b>	21	36	<b>-15</b>	44	57	<b>-13</b>

Source: Survey conducted Sept. 29-Nov. 6, 2016.

PEW RESEARCH CENTER

<http://www.pewresearch.org/fact-tank/2017/04/07/disabled-americans-are-less-likely-to-use-technology/>

# Main Areas of Difficulty

- Vision
- Mobility
- Hearing

# Vision

- Colorblindness

<http://www.colourblindawareness.org/colour-blindness/>



# Vision

- Vision Impairment

<http://www.who.int/news-room/fact-sheets/detail/blindness-and-visual-impairment>

# Mobility

- Movement

[https://ftp.cdc.gov/pub/Health\\_Statistics/NCHS/NHIS/SHS/2016\\_SHS\\_Table\\_A-10.pdf](https://ftp.cdc.gov/pub/Health_Statistics/NCHS/NHIS/SHS/2016_SHS_Table_A-10.pdf)

# Hearing

- Hearing Trouble

<https://www.cdc.gov/nchs/fastats/disability.htm>

# Need More to Sell This?

- It's not just for people with disabilities.
- <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3280373/>

# Need More to Sell This?

- It's the future.
- <http://www.pewresearch.org/fact-tank/2017/12/12/nearly-half-of-americans-use-digital-voice-assistants-mostly-on-their-smartphones/>

WHAT CAN WE DO?

# Vision - Color

**Last Name \***

**Address Line 2**

**State \***

**Country \***

Sign Me Up

**Last Name \***

**Address Line 2**

**State \***

**Country \***

Sign Me Up

# Vision

- Here is some text that does not have high enough contrast.



# Vision

- Here is some text that does not have high enough contrast.
- High contrast is important.

# Vision

- Here is some text that does not have high enough contrast.
- High contrast is important.
- High contrast makes a difference.

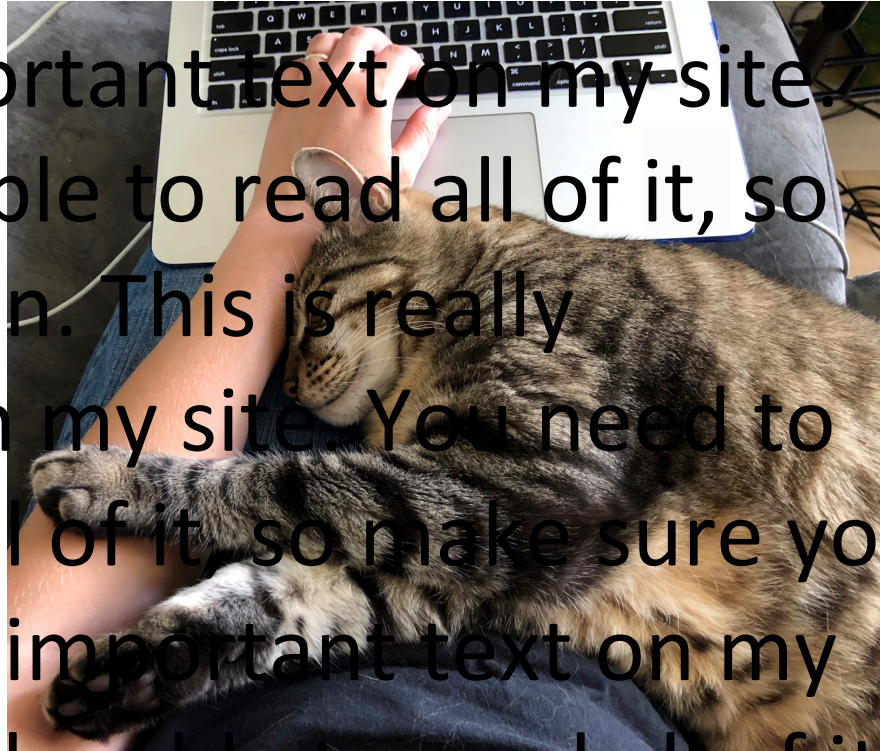
# Vision

This is really important text on my site. You need to be able to read all of it, so make sure you can. This is really important text on my site. You need to be able to read all of it, so make sure you can. This is really important text on my site. You need to be able to read all of it, so make sure you can. This is really important text on my site. You need to be able to read all of it, so make sure you can.



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# Vision



# Vision

This is the great description of my website.  
You can click [here](#) to get to some great content or you could click [here](#) to get to our newsletter or you could click [here](#) to send us an email.

# Vision

1. Enter your name.
2. Enter your email.
3. Click Continue.
4. Choose an item.
5. Click Select Item.
6. Choose the color.
7. Click Select Color.
8. Enter payment info.

# Mobility

## Personal Information (see [Privacy Policy](#))

First Name \*

Last Name \*

Address Line 1 \*

Address Line 2

City \*

State \*



Zip \*

Country \*



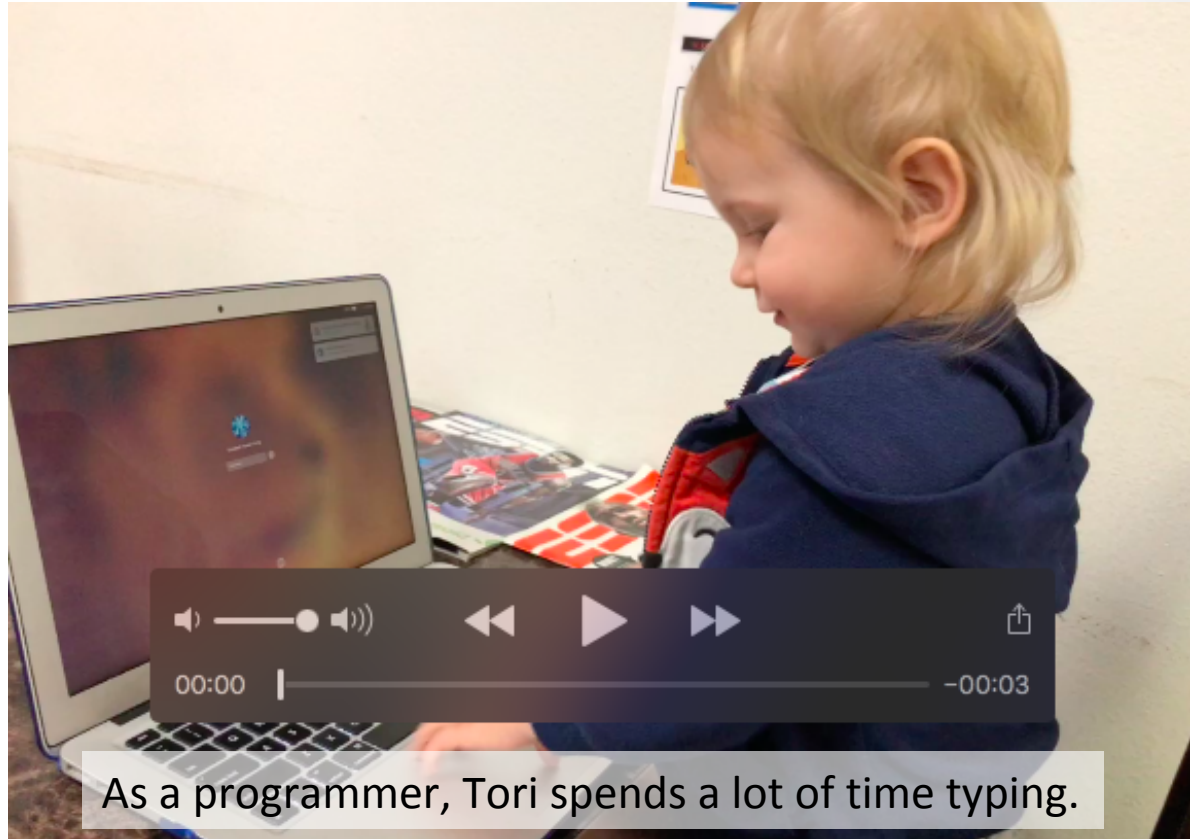
[Special Shipping Instructions?](#)

Clear Form

Sign Me Up



# Hearing



As a programmer, Tori spends a lot of time typing.

# TESTING

# Vision

- Enlarge your fonts
- Turn down your screen brightness
- Adjust the color saturation on your screen
- Disable your stylesheets

# Vision

Turn your monitor off/around and use:

VoiceOver - <https://help.apple.com/voiceover/info/guide/>

Narrator - <https://support.microsoft.com/en-us/help/17173/windows-10-hear-text-read-aloud>

NVDA - <https://www.nvaccess.org/>

Orca - <https://help.gnome.org/users/orca/stable/>

TalkBack - <https://support.google.com/accessibility/android/topic/3529932>

# Simulate Colorblindness

altreus.github.io says

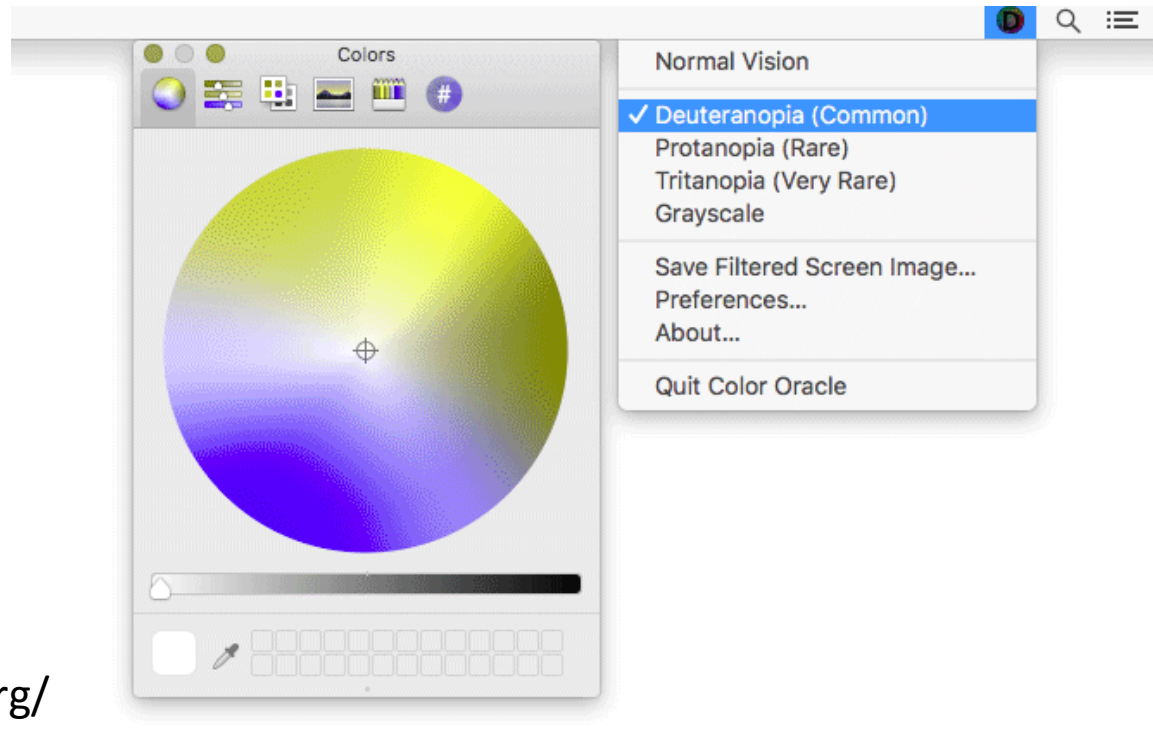
0: off; 1: protanopia; 2: protanomaly; 3: deuteranopia; 4:  
deuteranomaly; 5: tritanopia; 6: tritanomaly; 7: achromatopsia; 8:  
achromatomaly;

Cancel OK

Colour Blind

<https://github.com/Altreus/colourblind>

# Simulate Colorblindness



Color Oracle  
<http://colororacle.org/>

# Generate a Color Palette

Background Color	Font-Family	Font-Size (px)	Font-Weight	WCAG Standard ⓘ
<input type="text" value="#ffffff"/>	<input type="text" value="Helvetica"/> ▾	<input type="text" value="24"/>	<input type="text" value="400"/> ▾	<input type="text" value="AA"/> ▾

Editable Text

The quick brown fox jumps over the lazy dog.

**GENERATE COLOR PALETTE**


<http://colorsafe.co/>


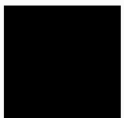

# Color Palette Accessibility Evaluator

**Color Palette Accessibility Checker: WCAG 2 Level AA** [Switch to WCAG 2 Level AAA](#)

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**Color Palette**

 **Select a color to analyze**

 <a href="#">00FF00</a>	 <a href="#">000000</a>	 <a href="#">0000FF</a>
---	---	---

[Back to palette creator](#)

**Analysis**

**Small Non-Bold Text (less than 18pt, or approximately 1.5em rendered) for 00FF00**

Color Code	Sample Text	Sample Text (inverted)	Pass or Fail	Ratio (pass>=4.5)
000000	Lorem ipsum	Lorem ipsum	PASS	15.3
0000FF	Lorem ipsum	Lorem ipsum	PASS	6.26

**Large Non-Bold Text (18pt or greater, or approximately 1.5em rendered) for 00FF00**

Color Code	Sample Text	Sample Text (inverted)	Pass or Fail	Ratio (pass>=3.0)
000000	Lorem ipsum	Lorem ipsum	PASS	15.3
0000FF	Lorem ipsum	Lorem ipsum	PASS	6.26

<https://accessibility.oit.ncsu.edu/tools/color-contrast/>




# Snook.ca Color Contrast Check


<b>Foreground Colour:</b> # 33FF33 Red: <input type="range"/> Green: <input type="range"/> Blue: <input type="range"/> Hue (°): <input type="range"/> Saturation (%): <input type="range"/> Value (%): <input type="range"/>	<b>Background Colour:</b> # 333333 Red: <input type="range"/> Green: <input type="range"/> Blue: <input type="range"/> Hue (°): <input type="range"/> Saturation (%): <input type="range"/> Value (%): <input type="range"/>	<b>Results</b> <b>This is example text. Some of it bolded. Some of it italicized.</b> Brightness Difference: (>= 125) <input type="text" value="119.747"/> Colour Difference: (>= 500) <input type="text" value="204"/> Are colours compliant? <input type="text" value="NO"/> Contrast Ratio <input type="text" value="9.321"/> WCAG 2 AA Compliant <input type="text" value="YES"/> WCAG 2 AA Compliant (18pt+) <input type="text" value="YES"/> WCAG 2 AAA Compliant <input type="text" value="YES"/> WCAG 2 AAA Compliant (18pt+) <input type="text" value="YES"/>
---	---	---

[https://snook.ca/technical/colour\\_contrast/colour.html](https://snook.ca/technical/colour_contrast/colour.html)


# WebAIM- Color Contrast Checker


**Foreground Color**

#0000FF 

Lightness 

**Background Color**

#FFFFFF 

Lightness 

**Contrast Ratio**  
**8.59:1**

[permalink](#)

---

**Normal Text**

WCAG AA: **Pass**

WCAG AAA: **Pass**

The five boxing wizards jump quickly.

---

**Large Text**

WCAG AA: **Pass**

WCAG AAA: **Pass**

The five boxing wizards jump quickly.

<https://webaim.org/resources/contrastchecker/>

# Vision - Colour Contrast Analyser

Colour Contrast Analyser (CCA) Edit View

**Contrast ratio** just below 4.5:1 (4.478:1)

**Foreground colour**

#777777 **HEX**

↑↓ ⇄ 🖌️ ?

**Background colour** (white)

#FFFFFF **HEX**

⇄ 🖌️ ?

▼ **Sample preview**

example text showing contrast 🖱️

**WCAG 2.1 results**

- ▶ **1.4.3 Contrast (Minimum) (AA)**
  - ✅ Pass for large text only ❌ Fail for regular text
- ▶ **1.4.6 Contrast (Enhanced) (AAA)**
  - ❌ Fail for large and regular text
- ▶ **1.4.11 Non-text Contrast (AA)**
  - ✅ Pass for UI components and graphical objects

# Vision

## Colour Contrast Analyser from The Paciello Group



<https://developer.paciellogroup.com/resources/contrastanalyser/>

# Mobility

- Disable your mouse/trackpad
- Interact with a touch screen using a stylus you hold with tweezers, chopsticks, or in your mouth
- Use your website one-handed
- Use voice recognition software only to navigate your site

# Hearing

- Turn off the sound

# Hearing

- Test audio contrast

Contrast Analysis (WCAG 2 compliance)

Contrast Analyzer, for measuring RMS volume differences between two selections of audio.

Parameters

	Start	End		Volume
Foreground:	<input type="text" value="00 h 00 m 00.00 s"/>	<input type="text" value="00 h 00 m 00.00 s"/>	<input type="button" value="Measure selection"/>	<input type="text"/>
Background:	<input type="text" value="00 h 00 m 00.00 s"/>	<input type="text" value="00 h 00 m 00.00 s"/>	<input type="button" value="Measure selection"/>	<input type="text"/>

Result

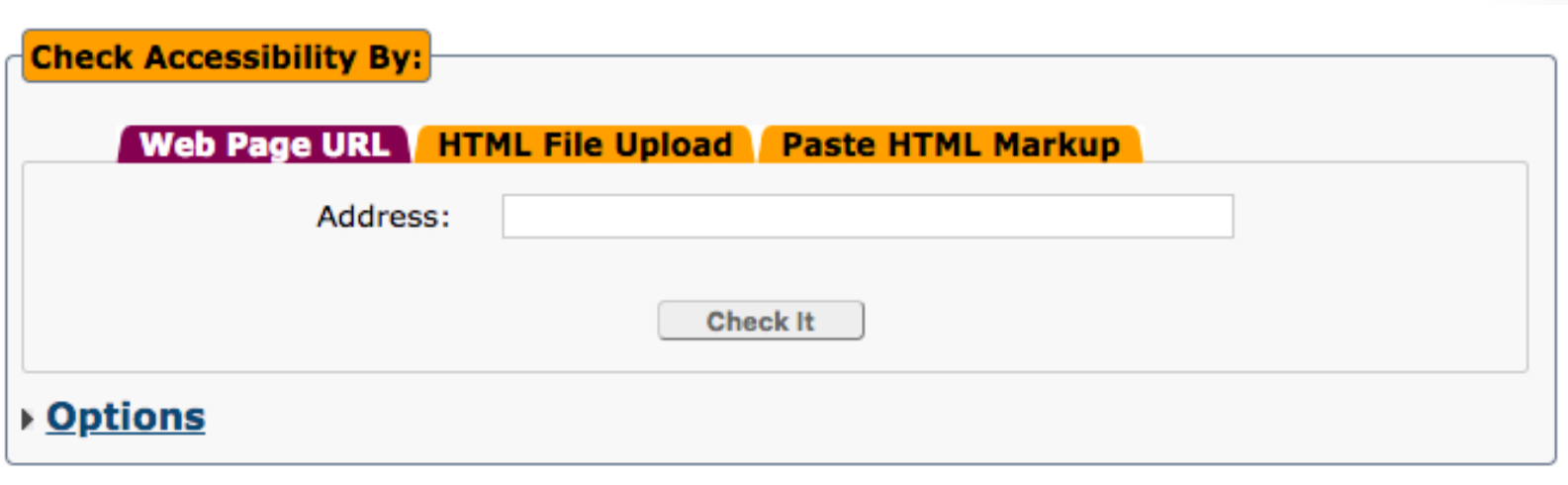
Contrast Result:

Difference:

<https://manual.audacityteam.org/man/contrast.html>

# Whole Analysis

- AChecker



The screenshot shows the AChecker web accessibility checker interface. At the top, there is a yellow tab labeled "Check Accessibility By:". Below this, there are three tabs: "Web Page URL" (purple), "HTML File Upload" (orange), and "Paste HTML Markup" (orange). The "Web Page URL" tab is selected. Below the tabs, there is a text input field labeled "Address:" with a white border. Below the input field is a button labeled "Check It". At the bottom left, there is a blue link labeled "Options" with a right-pointing triangle icon.

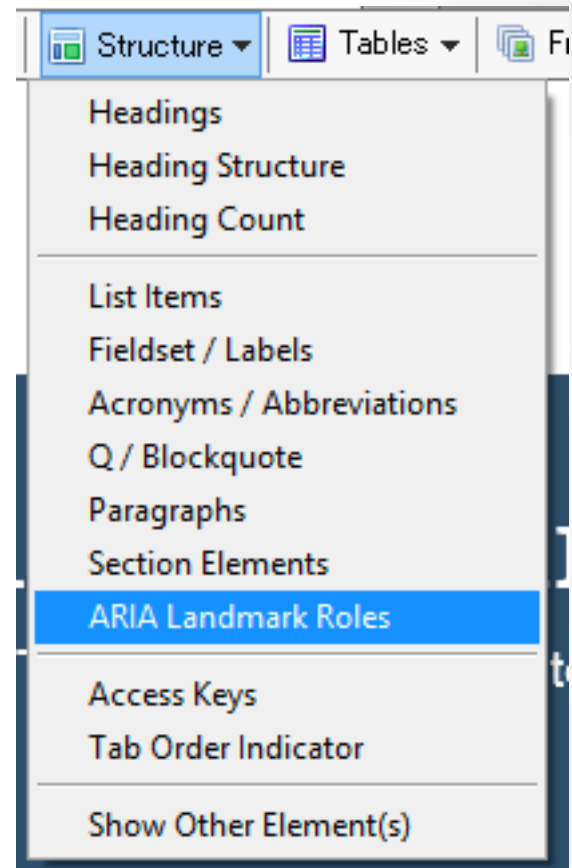
<https://achecker.ca/checker/index.php>



# Whole Analysis

- Web Accessibility Toolbar

The Paciello Group



<https://developer.paciellogroup.com/resources/wat/>

# Whole Analysis

- WAVE API  
<http://wave.webaim.org/api/>

PopeTech for WAVE  
<https://pope.tech/>

WAVE Runner  
<http://wave.webaim.org/waverunner>

# Whole Analysis

WAVE Browser Extension - <http://wave.webaim.org/extension/>

The screenshot displays the WAVE (Web Accessibility Evaluation Tool) interface overlaid on a Google search page. The WAVE sidebar on the left provides a summary of detected issues:

- Summary
- WAVE has detected the following:
  - 2 Errors
  - 4 Alerts
  - 3 Features
  - 3 Structural Elements
  - 53 HTML5 and ARIA
  - 1 Contrast Errors
- Panel Options
  - DETAILS: A listing of all the WAVE icons in your page.
  - DOCUMENTATION: Explanation of the WAVE icons and how you can make your page more accessible.
  - OUTLINE: The heading structure of the web page.

The main content area shows the Google search page with various accessibility annotations. A yellow checkmark icon at the top indicates that the following apply to the entire page. The search bar and buttons are annotated with green boxes containing ARIA labels and roles, such as:

- `aria-autocomplete="both", aria-haspopup="false", aria-label="Search" title`
- `aria-label="Google Search"`
- `aria-label="I'm Feeling Lucky"`
- `aria-controls="seti"`

At the bottom of the WAVE interface, there is a footer with "Feedback | Powered by WebAIM" and a code editor icon.

# Whole Analysis

## aXe Browser Extension -

The screenshot displays the aXe browser extension interface. On the left, a sidebar shows a list of issues found: "All issues found 77" with a "Run again" button. Below this, a list of issues is shown, with "Elements must have sufficient color contrast" highlighted, showing 74 instances. Other issues include "Heading levels should only increase by one" (1 instance), "Content should be contained in a landmark region" (1 instance), and "Elements should not have tabindex greater than zero" (1 instance).

The main panel shows the details for the selected issue: "Elements must have sufficient color contrast". It includes a description: "Ensures the contrast between foreground and background colors meets WCAG 2 AA contrast ratio thresholds" with an impact of "serious" and a "Learn more" link. The "Element location" is shown as `button[data-disable-with="Creating\ file.."]`. The "Element source" is shown as `<button class="btn btn-sm BtnGroup-item" type="submit" data-disable-with="Creating file.."> Create new file </button>`. Below this, a note states: "We are not sure this is an issue, because: Element's background color could not be determined due to a background gradient". A "Related node" section shows the same `button` element. At the bottom, there are radio buttons for "This is an issue" (selected) and "This is not an issue", a text input for "Provide an issue description:", and "Issue tags: category: color wcag2aa wcag143".

# Whole Analysis

SiteImprove- <https://siteimprove.com/>



# Automate Tests

- Unit Tests
- Integration Tests

Writing Automated Tests for Accessibility

<https://www.deque.com/blog/writing-automated-tests-accessibility/>

# Diverse Testers

Standard Usability Tests

<https://www.usability.gov/how-to-and-tools/methods/usability-evaluation/index.html>

# Live Accessibility Testing

- Accessible360  
<https://accessible360.com/>
- Perkins Access  
<https://www.perkins.org/access>
- AccessWorks  
<https://access-works.com/>



# Lots More Tools

Web Accessibility Evaluation Tools List  
<https://www.w3.org/WAI/ER/tools/>

18F Accessibility Guide – Resources  
<https://accessibility.18f.gov/>

18F Accessibility Guide – Tools  
<https://accessibility.18f.gov/tools/>

# GAAD

The purpose of GAAD is to get everyone talking, thinking and learning about digital (web, software, mobile, etc.) access/inclusion and people with different disabilities.

<http://www.globalaccessibilityawarenessday.org/>

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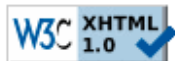
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# TREELINE DESIGN

CUSTOM WEBSITE DESIGN AND PROGRAMMING

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Contrast ratio

6.6:1

Foreground colour

#006D05

HEX



Background colour

(white)

#FFFFFF

HEX



▼ Sample preview

example text showing contrast



WCAG 2.1 results

▶ 1.4.3 Contrast (Minimum) (AA)

✔ Pass for large and regular text

▶ 1.4.6 Contrast (Enhanced) (AAA)

✔ Pass for large text only ✖ Fail for regular text

▶ 1.4.11 Non-text Contrast (AA)

✔ Pass for UI components and graphical objects

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Colour blindness simulation

### Monochromacy

<b>Achromatopsia (8.3:1)</b> <i>no color</i> Sample	<b>Achromatomaly (8:1)</b> <i>almost no color</i> Sample
---	--

### Dichromacy

<b>Protanopia (6.6:1)</b> <i>no red</i> Sample	<b>Deuteranopia (6.6:1)</b> <i>no green</i> Sample	<b>Tritanopia (6.6:1)</b> <i>no blue</i> Sample
--	--	---

### Trichromacy

<b>Protanomaly (6.9:1)</b> <i>low red</i> Sample	<b>Deuteranomaly (7:1)</b> <i>low green</i> Sample	<b>Tritanomaly (6.7:1)</b> <i>low blue</i> Sample
--	--	---

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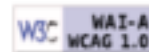
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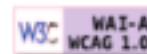
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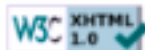
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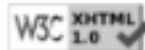
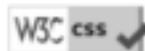
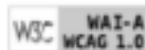
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At Treeline Design, LLC, we will build you a dynamic website or custom web application to fit your business needs. We program in HTML, PHP, and MySQL/SQL, as well as create custom graphics to make your site stand out. It is our goal to maximize your efficiency while keeping your costs down. Let your website do the work!


## How We Work

We will get to know you, your business, and your customers. We will sit down with you and talk through

Our site upholds the

The screenshot shows the Chrome DevTools Accessibility panel. The top bar includes tabs for Elements, Console, Sources, Network, Performance, Memory, Application, Security, Audits, Adblock Plus, and axe. The main panel displays the following information:

- Issue:** Page must have one main landmark
- Impact:** moderate
- Issue description:** Ensures the page has only one main landmark and each iframe in the page has at most one main landmark
- Element location:** html
- Element source:** <html xmlns="http://www.w3.org/1999/xhtml" xml:lang="en" lang="en">
- To solve this violation, you need to:** Fix the following: Page does not have a main landmark

 <span style="float: right;">i</span>	
All issues found 18 ▾	Run again
Page must have one main landmark	1
All page content must be contained by landmarks	1
Elements must have sufficient color contrast	16

### Elements must have sufficient color contrast

[Inspect Node](#) [Highlight](#)

Element source

```
<div id="header">Treeline Design</div>
```

---

**We are not sure this is an issue, because:**

Element's background color could not be determined due to a background image

Related node:

[Inspect](#)

```
#container4
```

This is an issue  This is not an issue

[SAVE](#)

Issue tags: category: color wcag2aa wcag143



Address:

Styles: OFF  ON

## Summary

- [Summary](#)
- [Details](#)
- [Reference](#)
- [Structure](#)
- [Contrast](#)

**0**  
Errors

**5**  
Contrast Errors

**1**  
Alerts

**7**  
Features

**3**  
Structural Elements

**0**  
ARIA

[View details >](#)

# TREELINE DESIGN

 CUSTOM WEBSITE DESIGN AND PROGRAMMING

 \*You are here - image: Leaf\*

## h1 Web Design to Bring your Business to the Top

 Home  
 Leaf  
 application  
 Customer  
 Leaf  
 Contact Us Today  
 Leaf  
 Reviews

## h1 How We Work

We will get to know you, your business, and your customers. We will sit down with you and talk through your vision, your goals, and your budget for the project. Then, we will come up with a plan to get you where you need to be and discuss each step of that plan with you. Our goal is not to just work for you, but to work with you. After completing the work, we will make sure that you are not only happy with the solution, but feel comfortable using it. We will always make sure that you receive a high-quality product that fits your business needs and personality.

Our site upholds the following standards:

 WAI-A  
WCAG 1.0

 \*Level A

conformance icon, W3C-WAI  
Web Content Accessibility  
Guidelines 1.0\*

 css

 \*Valid

CSS!\*

 XHTML  
1.0

 \*Valid

XHTML 1.0 Transitional\*



The following apply to the entire page:



### No page regions

No page regions or ARIA landmarks were found.

REFERENCE

CODE

A screenshot of a website header for 'TREELINE DESIGN'. The header features a green leafy border on the left and right sides. The main text reads 'TREELINE DESIGN' in large green letters, followed by 'Web Design to Bring your Business to the Top' in a smaller green font. Below this, a line of text says 'At Treeline Design, LLC, we will build you a dynamic web application'. Several accessibility icons are overlaid on the page: a red square with a white circle and a black 'x' (CUSTOM) is near the word 'CUSTOM'; a blue circle with 'h1' (h1) is near the main heading; a blue circle with three horizontal lines (Menu) is in the top right; a green square with a mountain range (Image) is near the text '\*You are here - image: Leaf\*'; another red square with a white circle and a black 'x' (CUSTOM) is near the word 'Home'; and another green square with a mountain range (Image) is near the word 'Leaf'. The text 'h application' is partially visible at the bottom right.





Address:

Styles: OFF  ON

## Details

Summary Details Reference Structure Contrast

### 5 Contrast Errors

5 X Very Low Contrast



### 1 Alerts

1 X No page regions



### 7 Features

4 X Alternative text



3 X Linked image with alternative text



### 3 Structural Elements





ML, PHP and MySQL/SQL as well as  
Customers

nd out. It is our goal to max  
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\*Leaf\*

\*Leaf\*

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following stan

REFERENCE CODE

W3C WAI-A  
WCAG 1.0 \*Level A

conformance icon, W3C-WAI  
Web Content Accessibility  
Guidelines 1.0\*

W3C CSS ✓ \*Valid

CSS!\*

W3C XHTML  
1.0 ✓ \*Valid

XHTML 1.0 Transitional\*

Linked image with  
alternative text

Alternative text is present for an  
image that is within a link.

# Learn More - Design

- Inclusive Design Principles  
<https://inclusivedesignprinciples.org/>
- Inclusive Design 24  
<https://inclusivedesign24.org/>
- The Paciello Group: cupper  
<https://github.com/ThePacielloGroup/cupper>
- Nutrition Cards for Accessible Components  
<https://davatron5000.github.io/a11y-nutrition-cards/>

# Learn More - Tools

- An Introduction to Screen Readers (Webinar)  
<https://accessibility.deque.com/live-webinar-introduction-to-screen-readers>
- Facebook's Alt Tag AI  
<https://newsroom.fb.com/news/2016/04/using-artificial-intelligence-to-help-blind-people-see-facebook/>

# Status of Platforms

- HTML5 Accessibility  
<https://www.html5accessibility.com/>
- HTML5 Implementation Status  
<http://stevefaulkner.github.io/html-mapping-tests/>
- Android and iOS Mobile Testing Guide  
[https://developer.paciellogroup.com/downloads/TPG\\_Mobile\\_Testing\\_Guide.pdf](https://developer.paciellogroup.com/downloads/TPG_Mobile_Testing_Guide.pdf)
- Windows Accessibility Options  
<https://www.microsoft.com/en-us/accessibility/windows>  
Apple Accessibility Options  
<https://www.apple.com/accessibility/>

# Standards

- Section 508 Guidelines and Resources  
<https://www.section508.gov/>
- United States Laws relating to 508 Standards  
<https://www.w3.org/WAI/policies/united-states/>
- VFO Standards  
<https://github.com/FreedomScientific/VFO-standards-support>
- Web Content Accessibility Guidelines  
<https://www.w3.org/WAI/standards-guidelines/wcag/>
- ADA Standards for Accessible Design  
[https://www.ada.gov/2010ADAstandards\\_index.htm](https://www.ada.gov/2010ADAstandards_index.htm)

# Standards Help

- Use Assistive Technology to Comply with Section 508  
<https://www.youtube.com/watch?v=4XJcswWmmAw>
- HTML 508 Checklist  
<https://www.hhs.gov/web/section-508/making-files-accessible/checklist/html/index.html>

# Resources - Tools

- W3C WAI Web Accessibility Evaluation Tools List  
<https://www.w3.org/WAI/ER/tools/>
- Juicy Studio  
<http://juicystudio.com/services.php>
- Top 25 Awesome Accessibility Testing Tools for Websites  
<https://dynamapper.com/blog/27-accessibility-testing/246-top-25-awesome-accessibility-testing-tools-for-websites>
- The Paciello Group: Accessibility Testing Tools  
<https://developer.paciellogroup.com/blog/2019/02/accessibility-testing-tools-we-use/>

# Resources - Persuasion

- Stories of Web Users  
<https://www.w3.org/WAI/people-use-web/user-stories/>
- WAI Tools & Techniques  
<https://www.w3.org/WAI/people-use-web/tools-techniques/>
- Mythbuster's Guide to Accessibility  
<https://medium.com/the-u-s-digital-service/mythbusters-guide-to-accessibility-92ccd88655c6>
- Usability.gov's Accessibility Page  
<https://www.usability.gov/accessibility>



# Additional Articles

- "Not All Screen Reader Users Are Blind" by Adrian Roselli  
<http://adrianroselli.com/2017/02/not-all-screen-reader-users-are-blind.html>
- "The Accessibility of Styled Form Controls & Friends"  
[https://scottaohara.github.io/a11y\\_styled\\_form\\_controls/](https://scottaohara.github.io/a11y_styled_form_controls/)
- "Lessons in iOS Voiceover Accessibility"  
<https://medium.com/aaptiv-engineering/lessons-in-ios-voiceover-accessibility-834c5ed9a374>
- "The Importance Of Manual Accessibility Testing"  
<https://www.smashingmagazine.com/2018/09/importance-manual-accessibility-testing/>
- "Involving Users in Evaluating Web Accessibility"  
<https://www.w3.org/WAI/test-evaluate/involving-users/>

# More Additional Articles

- "5 accessibility tests you can do in 5 minutes"  
<https://openinclusion.com/blog/5-accessibility-tests/>
- "The 6 Simplest Web Accessibility Tests Anyone Can Do"  
<http://www.karlgroves.com/2013/09/05/the-6-simplest-web-accessibility-tests-anyone-can-do/>
- "Easy Checks - A First Review of Web Accessibility"  
<https://www.w3.org/WAI/test-evaluate/preliminary/>
- "Handling common accessibility problems"  
[https://developer.mozilla.org/en-US/docs/Learn/Tools\\_and\\_testing/Cross\\_browser\\_testing/Accessibility](https://developer.mozilla.org/en-US/docs/Learn/Tools_and_testing/Cross_browser_testing/Accessibility)

# Takeaways

- Accessibility testing doesn't have to be expensive.
- A diverse testing group means better testing.
- Improving accessibility helps everyone.

# Find Me

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Joind.in

<https://joind.in/talk/544ce>