

Growing Accessibility

Advanced Web Accessibility Coding and Testing for Libraries

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Web Accessibility

“Web accessibility means that people with disabilities can use the web.”

- Tim Berners-Lee

Web Accessibility

Perceivable

Operable

Understandable

Robust

We are all in agreement...

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- Equivalent ability to access information and interact with websites and applications for all users is important.

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- Equivalent ability to access information and interact with websites and applications for all users is important.
- To truly work toward as equivalent a user experience as possible for all, at minimum baseline web accessibility measures are required.

Best Practices for Coding



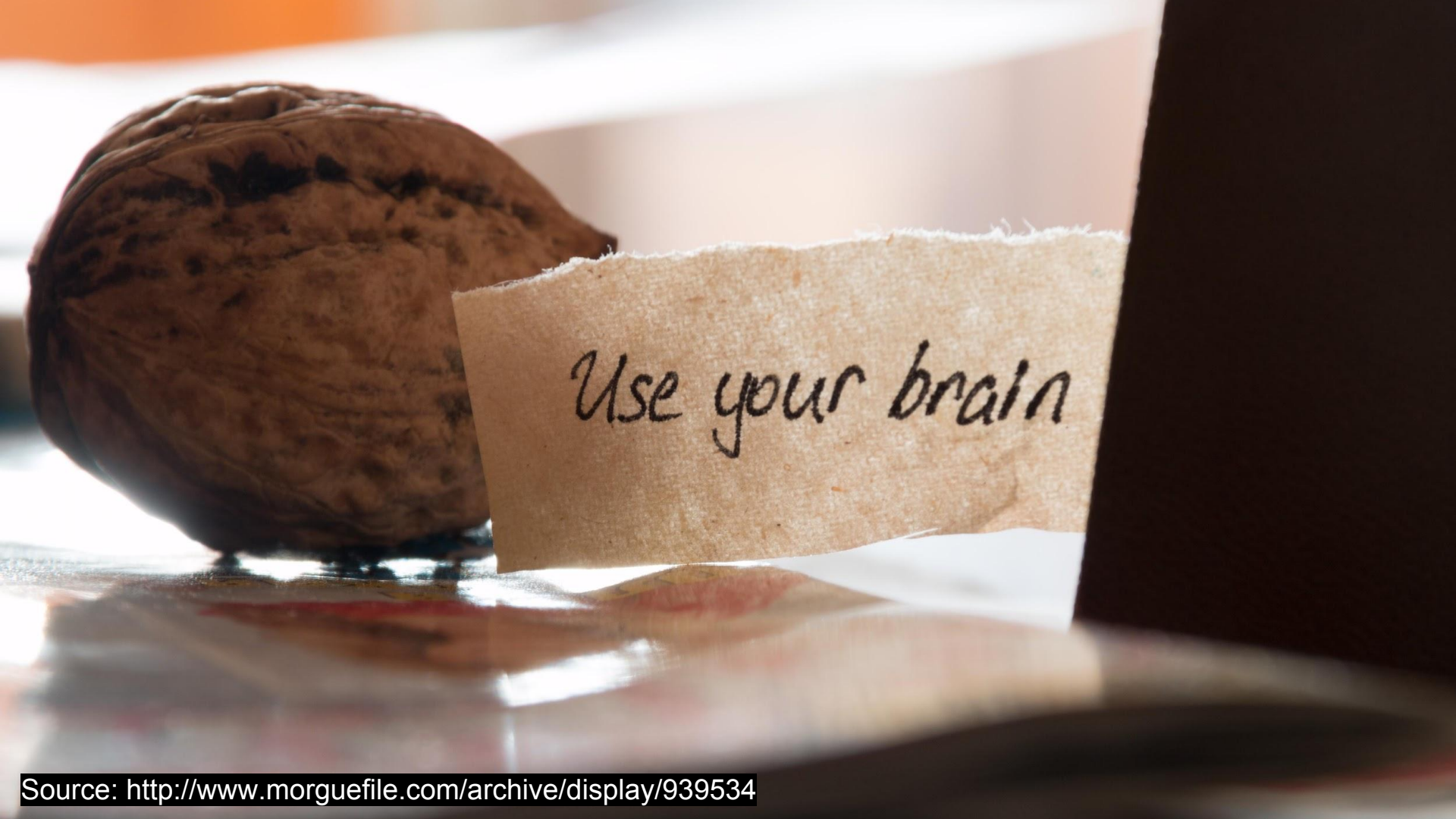
Best Practices for Coding



in 5 minutes!

Prioritize the fundamentals

...and execute them flawlessly.

A close-up photograph featuring a walnut on the left and a piece of torn, light-brown paper on the right. The paper has the words "Use your brain" written in black cursive. The scene is set on a reflective surface, and the background is blurred.

Use your brain

Prioritize the fundamentals

Image alt text

Lists

Properly ordered headings

```
<h1>There Can Be Only One</h1>
```

```
<h2>There Can Be More Than One Of Me</h2>
```

```
<h3>Provided That We Occur in Numeric Order</h3>
```

```
<h2>These Are Getting A Little Long For Actual  
Headings</h2>
```

Prioritize the fundamentals

Avoid walls o' text

Be mindful of color contrast

Provide alternatives to rich media

Equivalent text

Captions, transcription

Skip links



$$\left[\rho \right]^{-1} \left(\frac{1}{\rho} \right) = \frac{1}{\rho}$$

HTML5 Semantic Elements

```
<h1>Blog Posts</h1>
```

```
<p>Short intro text</p>
```

```
<h2>Code4Lib Philadelphia 2016!</h2>
```

```
<div class="blogpost">
```

```
  <p>I went to <a href="http://2016.code4lib.org/">Code4Lib Philadelphia  
2016</a> this year and it was a blast!</p>
```

```
  <p>I also managed to do some sightseeing.</p>
```

```
  <div style="float: left;">
```

```
    
```

```
    <span>It was smaller in person.</span>
```

```
  </div>
```

```
  <p>It was a great conference and the organizers are awesome!</p>
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HTML5 Semantic Elements

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ARIA

Accessible Rich Internet Applications

Roles

States & Properties



ARIA Roles

```
<div role="alert">
```

```
  You have been signed out due to inactivity.
```

```
</div>
```

```
<div role="status">
```

```
  Password successfully updated.
```

```
</div>
```


ARIA States & Properties

`aria-live="polite"`

`"assertive"`

`"off"`

ARIA States & Properties

```
aria-relevant="additions"  
  "deletions"  
  "text"  
  "all"
```

```
<div class="chat_queue" aria-live="polite"  
aria-relevant="additions deletions">  
  <ul>  
    <li>User 1</li>  
    <li>User 2</li>  
    <li>User 3</li>  
  </ul>  
</div>
```

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```

Prioritizing - Must, Should, Can

What must be done?

What should be done?

Additionally, what can be done?

Accessibility Testing



Accessibility Testing



**...also in 5
minutes!**

Automated Testing: Validators

WAVE (free)

<http://wave.webaim.org/>

AChecker (free)

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

Compliance Sheriff (\$\$)

<https://www.cryptzone.com/products/content-governance/compliance-sheriff>

Summary

WAVE has detected the following:

0 Errors

1 Alerts

7 Features

11 Structural Elements

0 HTML5 and ARIA

0 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.



Home



h1 jobs.code4lib.org studied

Submitted by wtd on Thu, 2015-09-17 16:47

Creating Tomorrow's Technologists: Contrasting Information Technology Curriculum in North American Library and Information Science Graduate

Programs against Code4lib Job Listings  by **Monica Maceli** recently appeared in the *Journal of Education for Library and Information Science* 56.3

(DOI:10.12783/issn.2328-2967/56/3/3). As the title states, it studies listings on jobs.code4lib.org:

This research study explores technology-related course offerings in ALA-accredited library and information science (LIS) graduate programs in North America. These data are juxtaposed against a text analysis of several thousand LIS-specific technology job listings from the Code4lib jobs website. Starting in 2003, as a popular library technology mailing list, Code4lib has since expanded to an annual conference in the United States and a job-posting website. The study found that database and web design/development topics continued to dominate course offerings with diverse sub-topics covered. Strong growth was noted in the area of user experience but a lack of related jobs for librarians was identified. Analysis of the job listings revealed common technology-centric librarian and non-librarian job titles, as well as

Search


h2 Navigat



- Recent content
- Feed aggregator

h2 User lo

Username 

Password 



- Create new account
- Request password

Automated Testing: Testing Suites

Capbara-Accessible (Rails)

<https://github.com/Casecommons/capybara-accessible>

Robot Framework Accessibility Testing Libraries (Python)

<https://pypi.python.org/pypi/robotframework-selenium2accessibility/0.2.1>

Google Chrome Accessibility Developer Tools

<https://github.com/GoogleChrome/accessibility-developer-tools>

Home

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Log in or register to post comments

Elements Console Sources Network Timeline Profiles »

```
Cr1:29.8>
  ▶ <div id="skip-link">_</div>
  ▼ <div id="header">
    ▼ <a href="/" title="Home" rel="home" id="logo">
      
    </a>
  </div>
  ▶ <div class="navlinks">_</div>
  ▼ <table id="content">
    ▼ <tbody>
      ▼ <tr>
        ▼ <td id="main">
          <h2 class="element-invisible">You are here</h2>
          ▶ <div class="breadcrumb">_</div>
          <a id="main-content"></a>
          <h1 class="title" id="page-title">jobs.code4lib.org studied</h1>
          ▶ <div class="region region-content">_</div>
        </td>
        ▶ <td id="sidebar-second" class="sidebar">_</td>
      </tr>
    </tbody>
  </table>
```

html body table#content tbody tr td#main **h1#page-title.title**

Styles Event Listeners DOM Breakpoints Properties Accessibility Properties

Color

Contrast ratio: 21.00

Text

jobs.code4lib.org studied

content: jobs.code4lib.org studied

Remember the human aspect





Self-guided testing

Make a list of everything that users **MUST** be able to perceive, understand, and do on a given test site.

Self-guided testing

Unplug your mouse (or turn it around).

Unlink all stylesheets.

Turn off the monitor and turn on a screen reader.

Use the screen reader navigation commands.

Challenge the way you interact with a site.



Advocacy in the community

Lead by example.

Realize that you have a gift to share.

...never stop helping someone!

Embrace continuous improvement.



Thank you!

Katherine Lynch

katherly@upenn.edu

@katelynch

Web Accessibility Basics

- W3C WAI Web Accessibility Basics
https://www.w3.org/WAI/EO/wiki/Web_Accessibility_Basics
- WebAIM Intro to Web Accessibility
<http://webaim.org/intro/>
- Web Accessibility Tutorials
<https://www.w3.org/WAI/tutorials/>