

# I WANT YOU TO BECOME AN ACCESSIBILITY SUPERHERO

Rob Porter

Accessibility Evangelist



Python Web Conf 2019

[Introduction to Web Accessibility](#)[WebAIM Training](#)

# The WebAIM Million

An accessibility analysis of the top 1,000,000 home pages

[Home](#) > [WebAIM Projects](#) > [The WebAIM Million](#) > Site Lookup



Related Resources

- [WAVE Accessibility Evaluation Tool](#)
- [WAVE Stand-alone API](#)

## Results for fbi.gov

**WAVE Accessibility Rank\***: 22,529 of 1,000,000 (Top 5% of all home pages)

**Popularity Rank**: 733 of 1,000,000

**Number of accessibility errors detected**: 1

**WCAG 2 A/AA failure detected**: Yes

**Number of page elements**: 834

**Error density**: 0.12%

*(percent of page elements that have an error)*

**Top error types detected**:

- Low contrast text

[Analyze fbi.gov using WAVE](#) ➔

# Lawsuits



PennState

Berkeley  
UNIVERSITY OF CALIFORNIA

MIAMI  
UNIVERSITY  
OXFORD, OH • EST. 1809

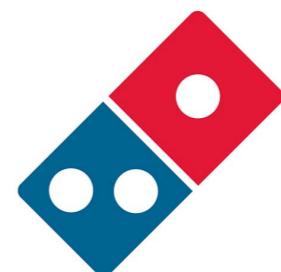
NETFLIX



TARGET

Winn<sup>✓</sup>Dixie

PLAYBOY



Domino's<sup>®</sup>

CodeSniffer Heading Structure Forms a11y Images a11y Tables a11y Lists ARIA a11y Landmarks Tabindex Iframes WCAG 2.0 Checklist Grayscale

https://twitter.com/jmspool/status/1157019600619483136?s=12

Search

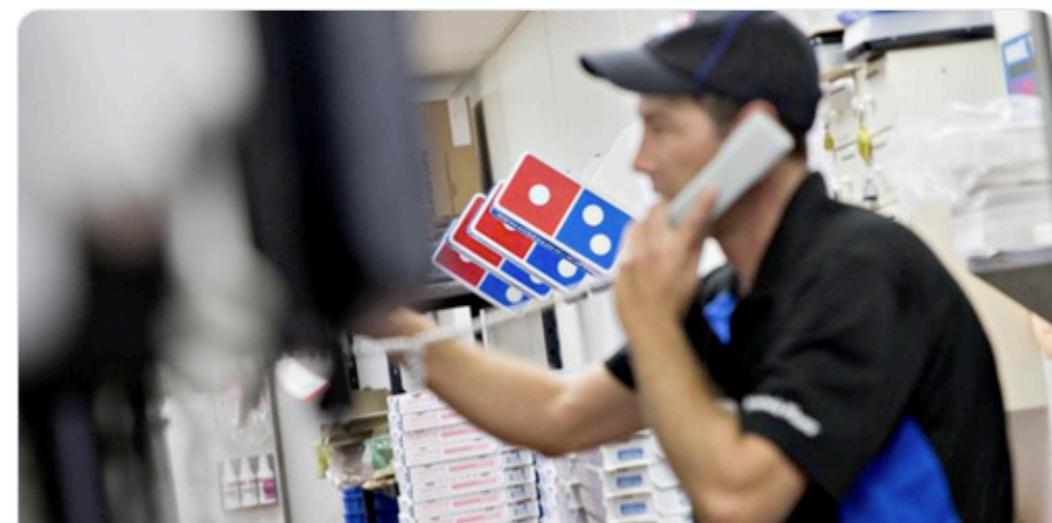
Home Moments

Jared Spool @jmspool Follow

Domino's will ask the Supreme Court to reverse the 9th Circuit decision that their website should be accessible to the blind.

In court docs, Domino's revealed it would've cost \$38,000 to make it accessible.

They're fighting this.



A blind man couldn't order pizza from Domino's. The company want...  
Domino's has petitioned the Supreme Court to hear the case, where it could prove to be a landmark battle over the rights of disabled people on cnbc.com

1:05 PM - 1 Aug 2019

2,432 Retweets 3,245 Likes

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## WCAG 2.0

- ▶ Web Content Accessibility Guidelines (WCAG) is developed through the W3C body
- ▶ There are 3 levels of WCAG 2.0: A, AA, AAA
- ▶ WCAG 2.1

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## PAUL J ADAM'S WCAG CHECKLIST

- ▶ <http://pauljadam.com/wcag20checklist.html>

# MAJOR ISSUES

---

- ▶ Headings
- ▶ Keyboard
- ▶ Modal dialogs
- ▶ Mega Menus
- ▶ Forms
- ▶ Disabled pinch-to-zoom
- ▶ Audio and video captioning
- ▶ Accordions and hamburger navigation
- ▶ Colors

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# Headings

`<section>, <article>, <nav>, <aside>`

`<h1>IndyPy</h1>`

`<main>`

`<article>`

`<h1>Python Web Conf</h1>`

`<h2>Keynote Speakers</h2>`

`...`

`<h2>Other Speakers</h2>`

`</article>`

`<article>`

`<h1>Pydata</h1>`

`<h2>Keynote Speakers</h2>`

`...`

`</article>`

`</main>`

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# Forms

```
<label for="indypy-name">Name:</label>
```

```
<input id="indypy-name" type="text" name="textfield">
```

# Forms

```
<label for="resetpass">Reset Password:</label>  
  
<input type="password" name="resetpass" id="resetpass"  
aria-describedby="newpass">  
  
<br>  
  
<span id="newpass">New password must be 8-15  
characters and include letters and numbers</span>
```

# Forms

## Handling Errors

- 1.) Error messages must be spoken automatically, the screen reader should NOT go silent on a bad submit!
- 2.) Focus should be sent to the list of error messages or the first invalid input with an inline error message that's programmatically associated.
- 3.) Use HTML 5 input types.

# Forms

## HTML 5 input types

<input type="button">

<input type="checkbox">

<input type="color">

<input type="date">

<input type="datetime-local">

<input type="email">

<input type="file">

<input type="hidden">

<input type="image">

<input type="month">

<input type="number">

<input type="url">

<input type="password">

<input type="week">

<input type="radio">

<input type="range">

<input type="reset">

<input type="search">

<input type="submit">

<input type="tel">

<input type="text">

<input type="time">

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# Disabled pinch-to-zoom

```
<meta name="viewport" content="width=device-width,  
initial-scale=1, maximum-scale=1, user-scalable=no">
```

```
<meta name="viewport" content="width=device-width,  
initial-scale=1">
```

user-scalable, min-scale and max-scale are ignored in iOS  
10+

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# Audio and video captioning

## Captions

Synchronized - the text content should appear at approximately the same time that audio would be available

Equivalent - content provided in captions should be equivalent to that of the spoken word

Accessible - caption content should be readily accessible and available to those who need it

## Transcripts

## Audio Descriptions

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- ▶ Colors

# Accordions and hamburgers

```
<button aria-expanded="true">  
<button aria-expanded="false">
```

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- ▶ **Colors**

# Colors

Don't rely on color only to convey meaning. Ever! Use both colors and symbols

Don't use these color combinations

Green & Red

Green & Brown

Blue & Purple

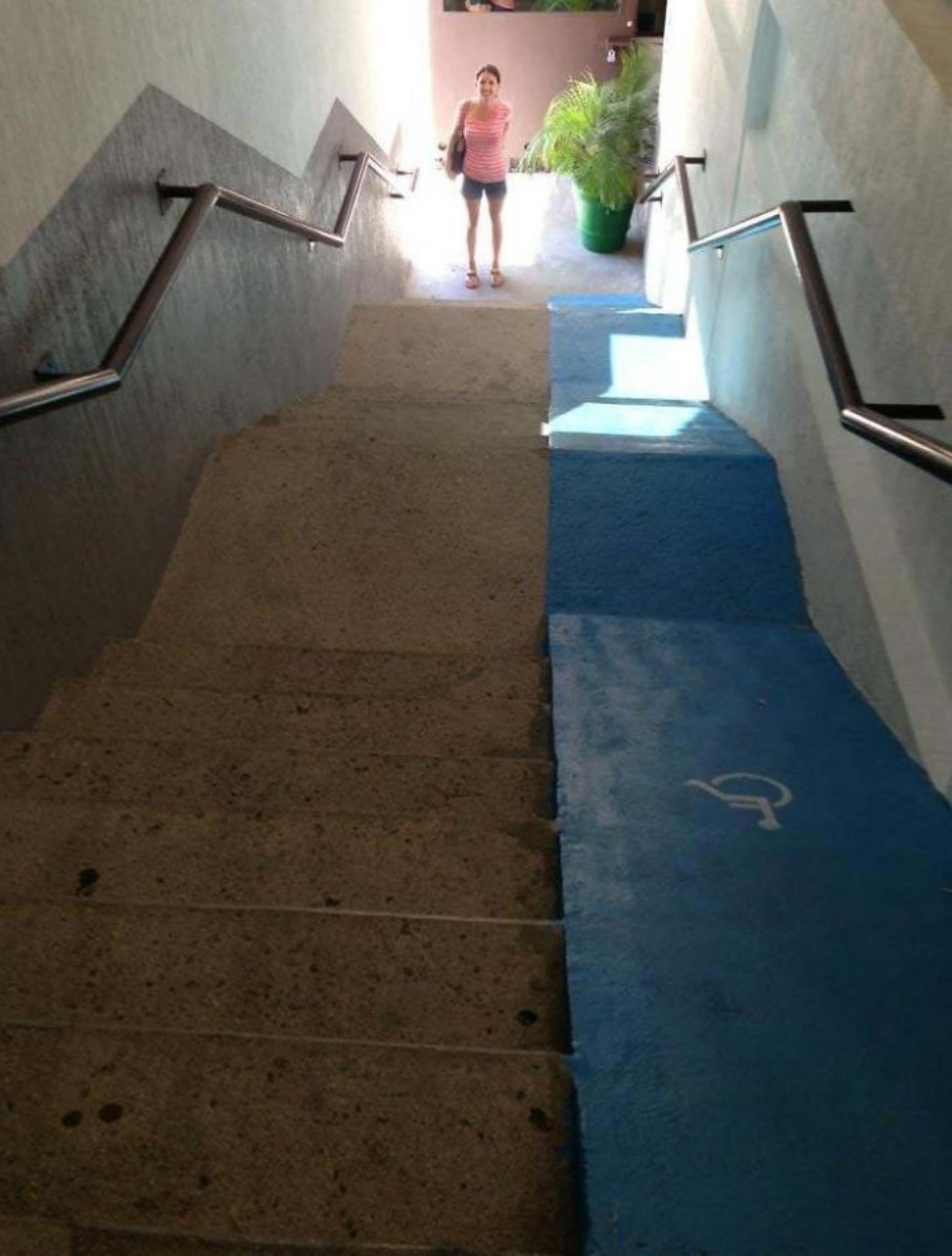
Green & Blue

Light Green & Yellow

Blue & Grey

Green & Grey

Green & Black



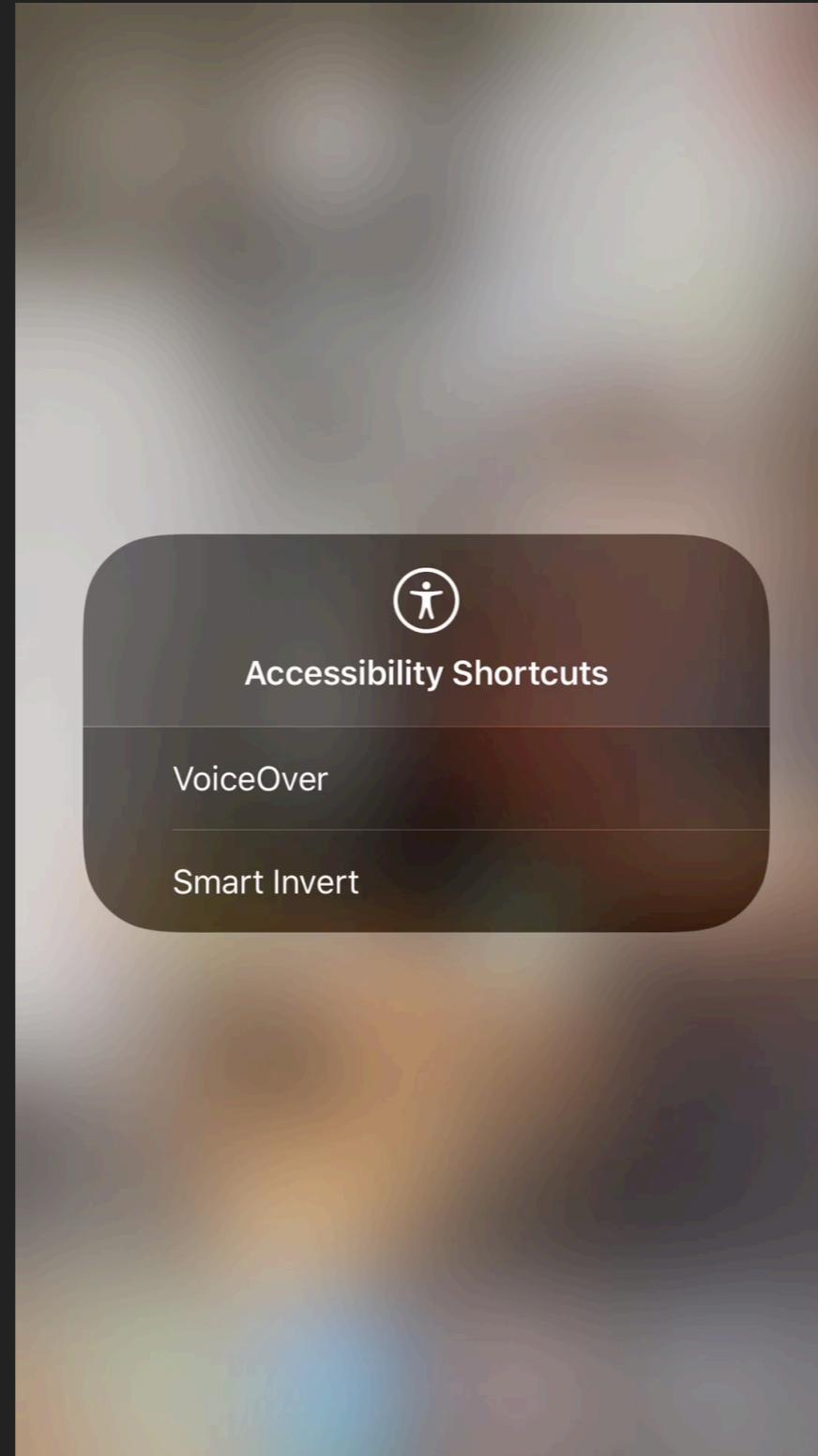


**BUILT IN TOOLS.**

## SCREEN READERS

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# VOICE OVER IPHONE



# WINDOWS AND LINUX

- ▶ No default tools.



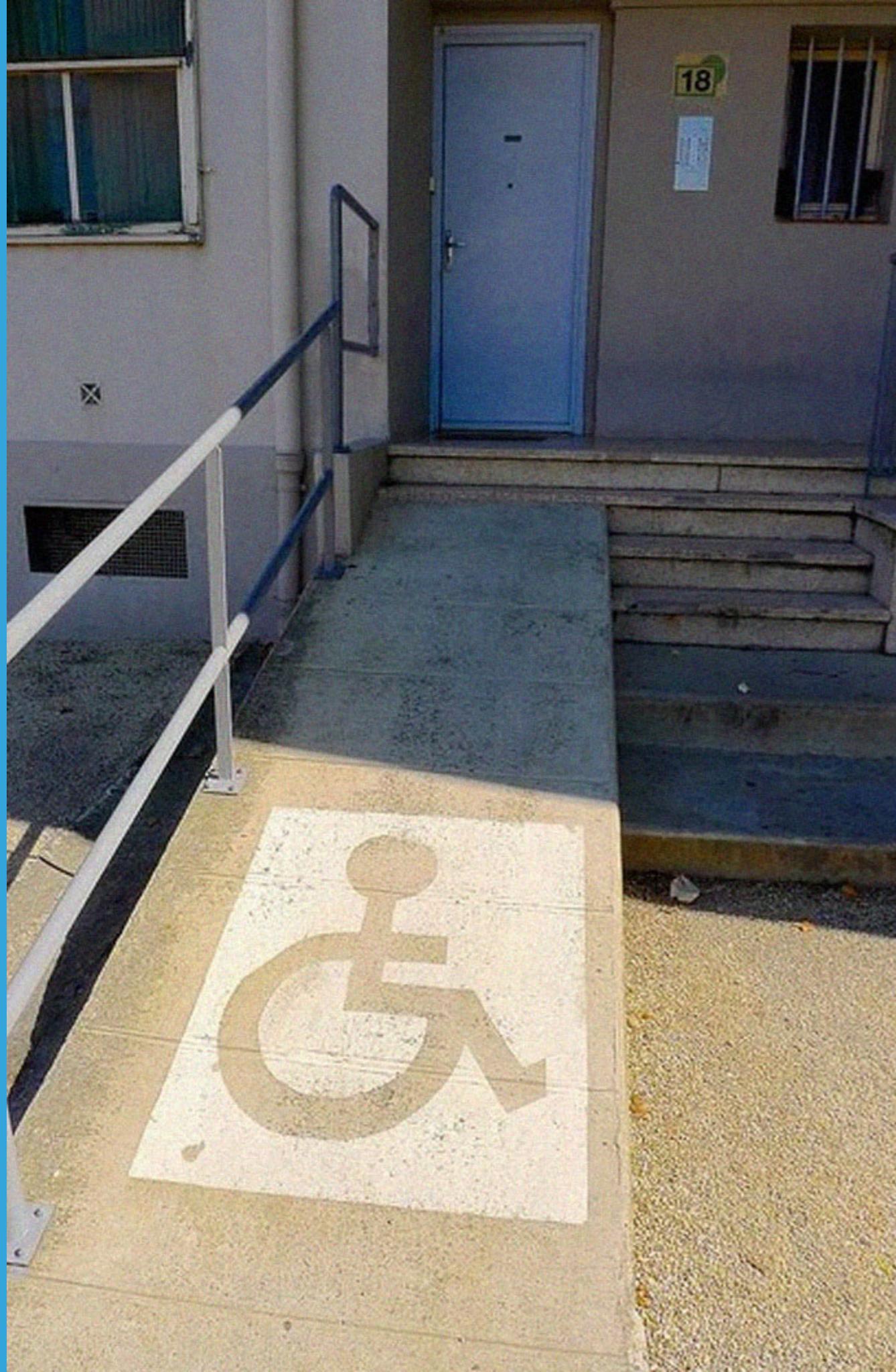
# BROWSER ADD ONS

### FIREFOX OR CHROME

- ▶ Chrome has a built in audit
- ▶ Firefox also have built in tools but I don't like it as much.
- ▶ AXE: <https://www.deque.com/products/axe/> (F+C)
- ▶ WCAG Contrast checker: <https://addons.mozilla.org/en-US/firefox/addon/wcag-contrast-checker/> (F)

### FIREFOX OR CHROME

- ▶ WAVE: <http://wave.webaim.org/extension/> (F + C)
- ▶ HeadingsMap: <https://addons.mozilla.org/en-US/firefox/user/rumoroso/> (F) or <https://chrome.google.com/webstore/detail/headingsmap/flbjommegcjonpdmenkdiocclhjacmbi?hl=en> (C)



# BOOKMARKLETS

## BOOKMARKLETS

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- ▶ [https://squizlabs.github.io/HTML\\_CodeSniffer/](https://squizlabs.github.io/HTML_CodeSniffer/)
- ▶ <https://hinderlingvolkart.github.io/h123/>

# PAUL J ADAMS BOOKMARKLETS

- ▶ <http://pauljadam.com/bookmarklets.html>
- ▶ Aria Bookmarklet
- ▶ Forms Accessibility (checks forms.. labels..)
- ▶ Grayscale - take all the color away
- ▶ Images Alt Check
- ▶ Tables
- ▶ Lists
- ▶ Tab index

**FAIL**



**EXTERNAL TEST**

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## EXTERNAL TEST

- ▶ <http://wave.webaim.org/>



# DESKTOP APPLICATIONS

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# DESKTOP APPLICATIONS

- ▶ Colour Contrast Analyzer: <https://developer.paciellogroup.com/resources/contrastanalyser/> (Mac and Windows)
- ▶ Sim Daltonism (mac/iphone) <https://michelf.ca/projects/sim-daltonism/>
- ▶ Color Oracle: <http://colororacle.org/index.html> (Mac, Windows, Linux)



# Automated Testing

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# AUTOMATED TESTING

- ▶ aXe-core: <https://www.deque.com/products/axe-core>



# SCREEN READERS

IMAGE: I

## SCREEN READERS

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IE + JAWS (costly (1,000 dollars) but there is a free 45 min mode)

Firefox + NVDA (open source and free)

Safari + VoiceOver

Mobile Safari + VoiceOver for iOS

Firefox + TalkBack for Android

# JAWS WINDOWS

Live Demo

## NVDA WINDOWS

Live Demo

[https://webaim.org/articles/  
voiceover/](https://webaim.org/articles/voiceover/) shortcuts

# I WANT YOU TO BECOME AN ACCESSIBILITY SUPERHERO

Any Questions?

[rporter@sixfeetup.com](mailto:rporter@sixfeetup.com)

twitter:robzonenet



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