



Accessibility

A Samuel Pottinger
Stat 198: IDSV
April 15, 2025



Today

> Introduction

Visual Accessibility

Group Activity

Motor Accessibility

Additional Resources

Starting with games



When working in web, there are clear guidelines



*Strategies, standards, resources to
make the Web accessible to people
with disabilities*

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Standards/ Guidelines

Web Content – WCAG 2

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WCAG 2 Overview

Summary

This page introduces the Web Content Accessibility Guidelines (WCAG) including WCAG 2.0, WCAG 2.1, and WCAG 2.2. WCAG documents explain how to make web content more accessible to people with disabilities.

Accessibility is good for everyone

Civic Engagement

The Curb-Cut Effect

Laws and programs designed to benefit vulnerable groups, such as the disabled or people of color, often end up benefiting all of society.

CITE

SHARE

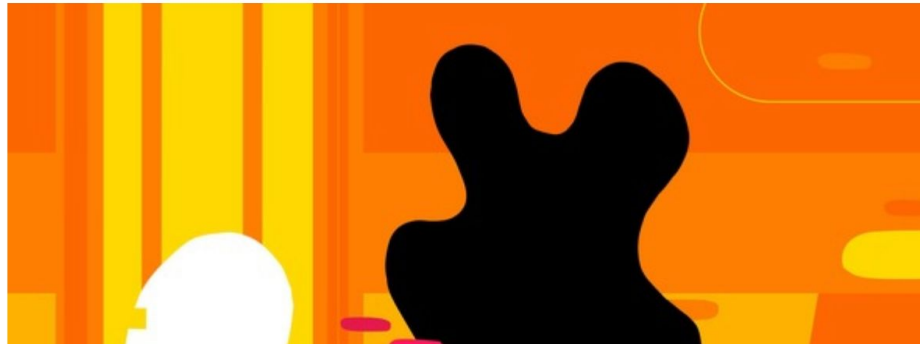
COMMENT

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By [Angela Glover Blackwell](#) | Winter 2017





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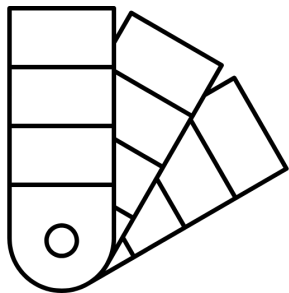
> **Visual Accessibility**

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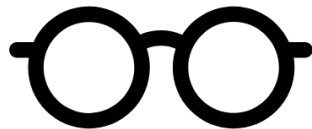
Additional Resources

Visual accessibility at a high level



Color
Deficiency

May have contrast
settings enabled



Low
Vision

May use magnifier
or scaled resolution



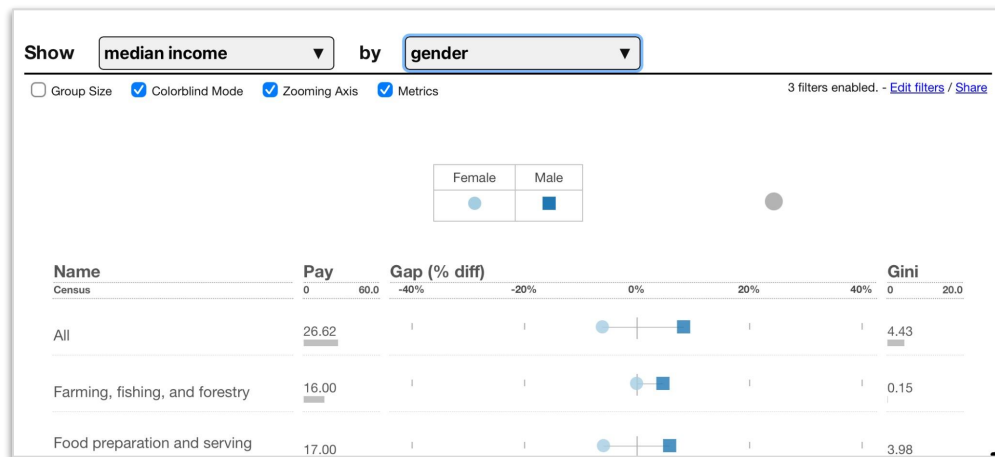
Blind or
Partially Blind

May use screen
reader / keyboard
only

Designing for Color Deficiency (WCAG 1.4.1)

Color should not be the only way that elements are visually distinguished from each other.

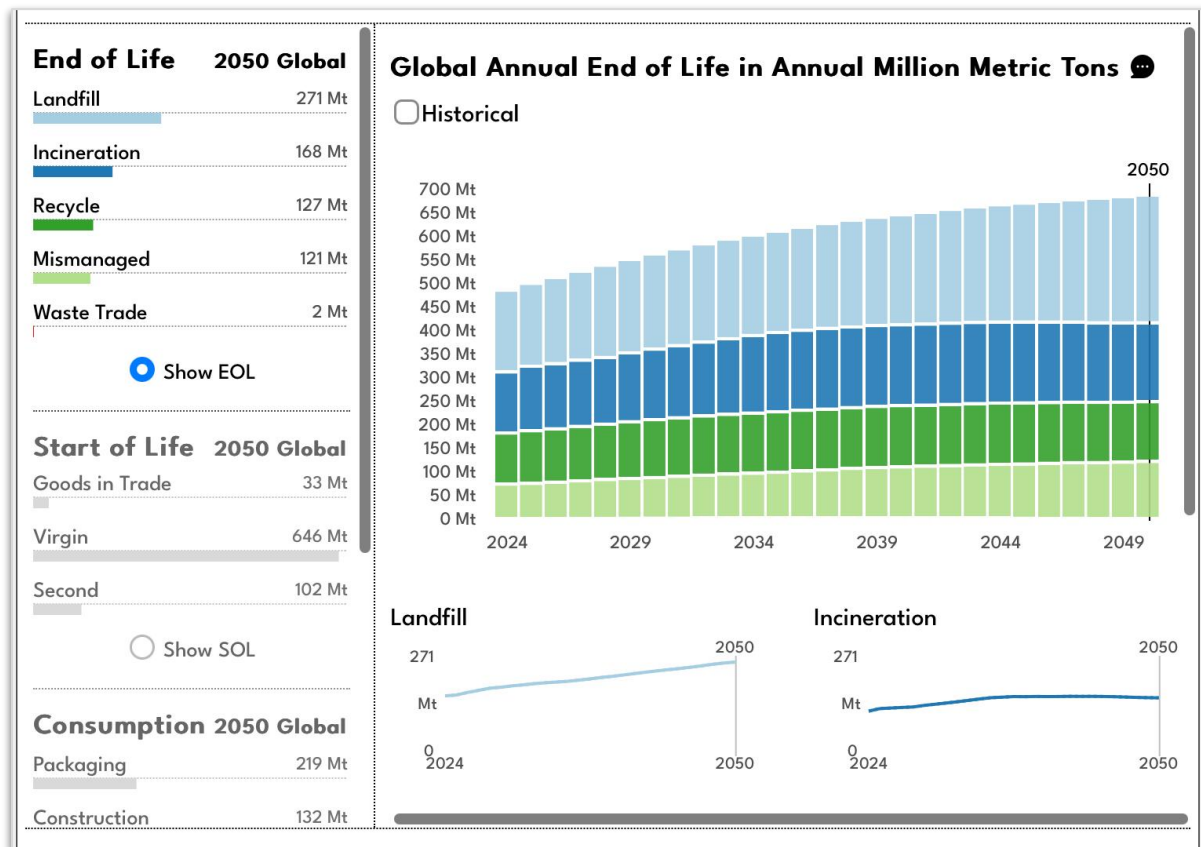
This is sometimes called “double encoding” as color is redundant.



Designing for Color Deficiency (WCAG 1.4.1)

Another option is to offer alternative visualizations.

Be careful with semantic association.



Low Vision: Minimal Contrast (WCAG 1.4.3)

We should ensure that a color is sufficiently different from its background to be perceived.

Also, ensure sufficient contrast between elements as well.

Contrast Checker

[Home](#) > [Resources](#) > Contrast Checker

Foreground

Hex Value
#0000FF

Color Picker

Alpha
1

Lightness

Background

Hex Value
#FFFFFF

Color Picker

Lightness

Contrast Ratio

8.59:1

[permalink](#)

Normal Text

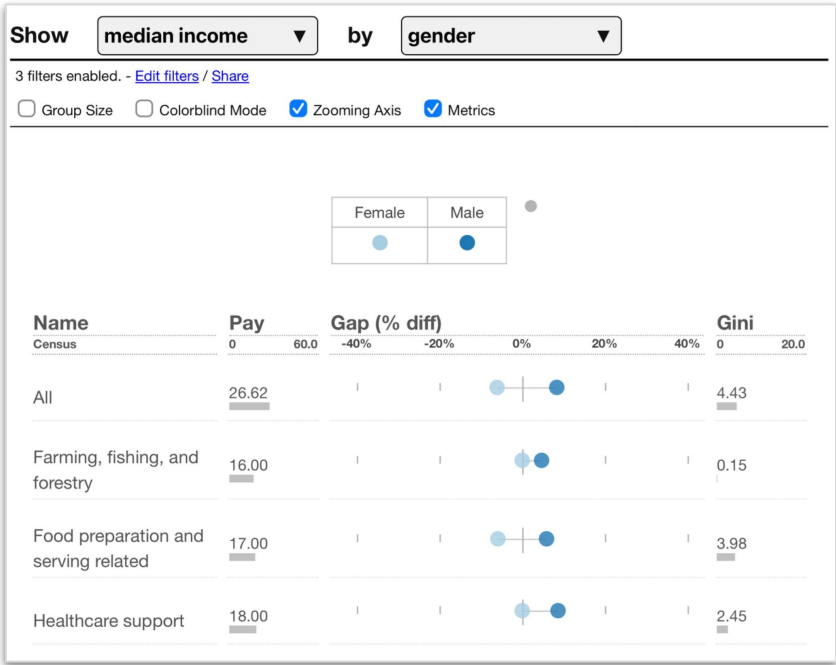
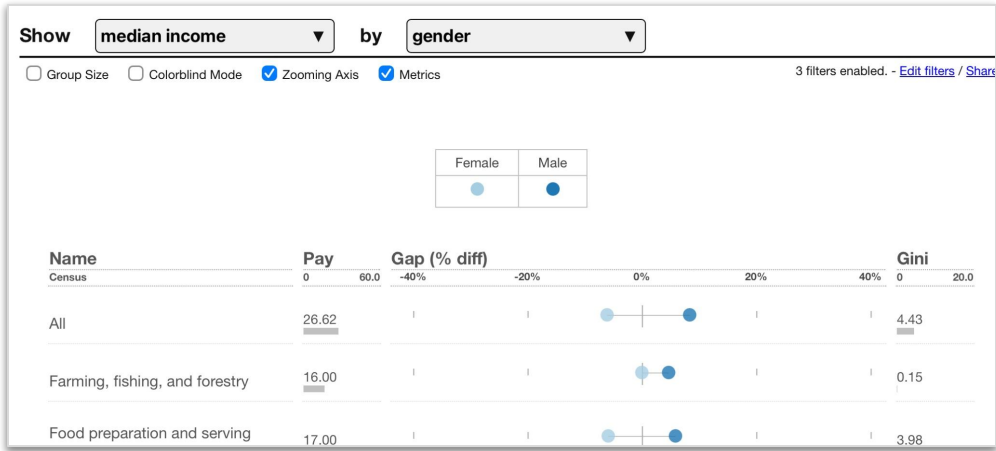
WCAG AA: **Pass**

WCAG AAA: **Pass**

The five boxing wizards jump quickly.

Low Vision: Resize (WCAG 1.4.4)

The application should still work when zoomed to 200%



Low Vision: Supporting Screen Readers (WCAG 1.1.1)

Typically this comes in the form of a non-visual alternative such as a table or data download.

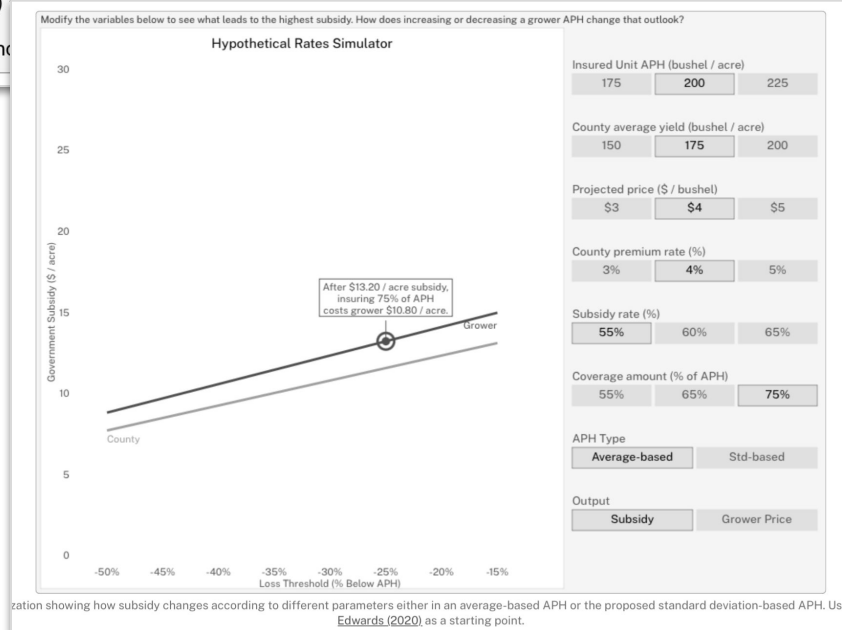
The formulas which can conceptually simulate rate setting:

- **overall price** = insured unit aph * projected price * county premium rate * coverage amount
- **subsidy** = subsidy rate * overall price
- **cost to grower** = (1 - subsidy rate) * overall price

This is an alternative to a visualization which evaluates these equations for some examples. One such set of examples:

- **overall price** = 200 bushel / acre * \$4 / bushel * 4% * 75% = \$24 / acre
- **subsidy** = 55% * \$24 / acre = \$13.20 / acre
- **cost to grower** = (1 - 55%) * \$24 / acre = \$10.80 / acre

The subsidy increases as APH increases





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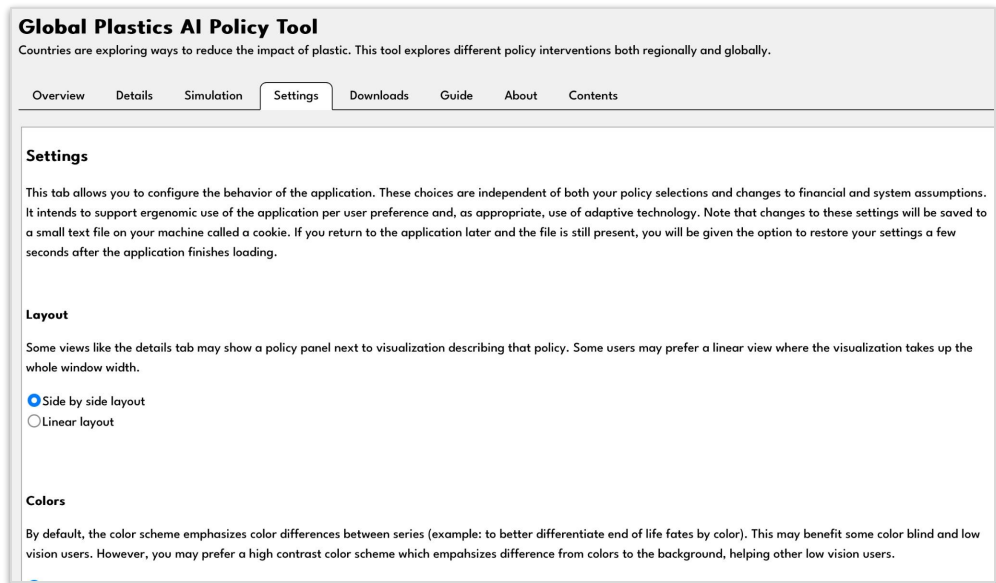
Additional Resources

Let's try some accessibility options

Try out the different accessibility options at:

<https://global-plastics-tool.org>

What kind of impairment might each option be trying to address?





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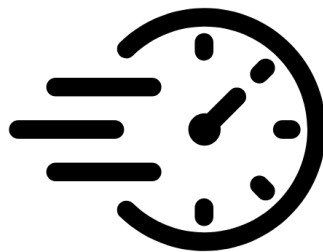
Additional Resources

Interactive visualization has some motor concerns



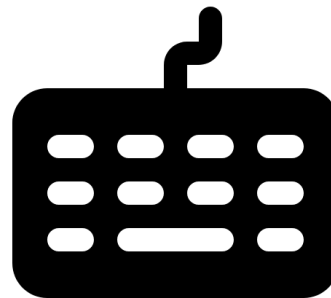
Fine Motor Control

May use alternative input devices.



Timed Inputs

May require additional time.

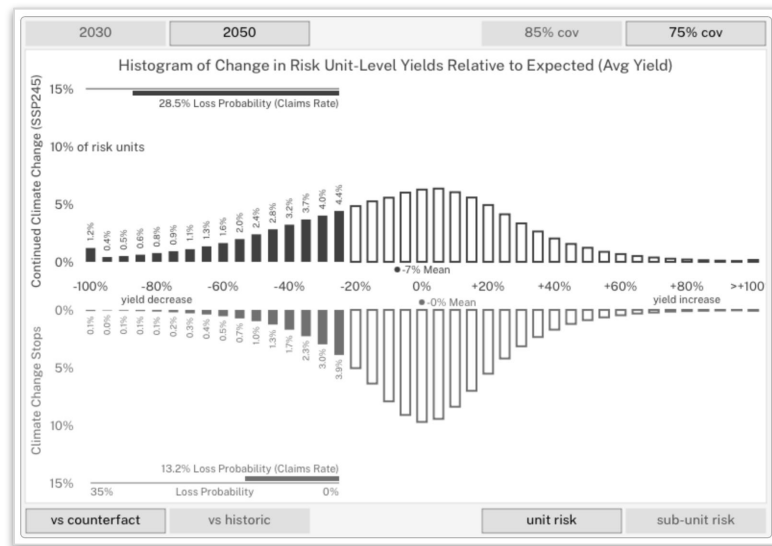


Keyboard-only

May not have a pointing device.

Provide non-keyboard controls (WCAG 2.1.1)

If doing custom drawing, consider adding keyboard alternatives to main controls.



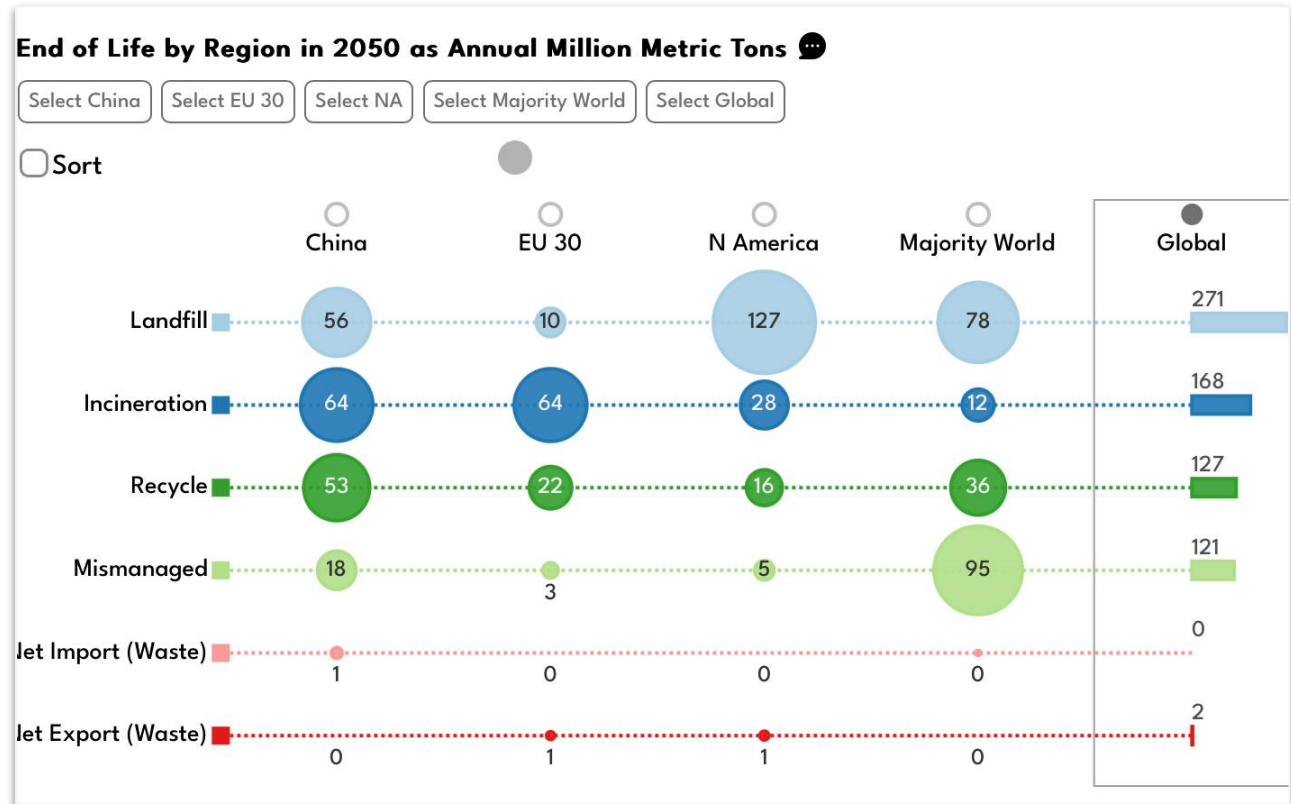
 The distribution visualization has the following controls:

- **Esc**: Exit the visualization
- **y**: Change year
- **c**: Change coverage
- **v**: Change vs historic or counterfactual
- **u**: Change unit size

The visualization will need focus in order to receive keyboard commands.

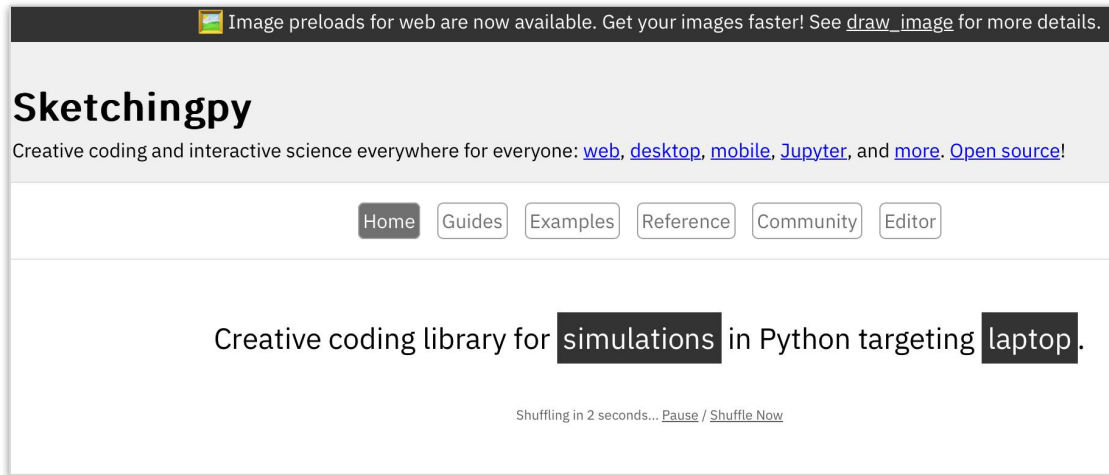
Use tab order and focus (WCAG 1.3.2)

For those using standard HTML elements, consider tab and tab focus.



Adjustable timing (WCAG 2.2.1)

Allow modification of timing or pausing of timed actions.



Reading

The reading for this lecture will include more info about motor impairment.



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> Additional Resources

Accessibility is a deep topic



servicesarticlesresourcesprojectscommunity

Search:

Introduction to Web Accessibility

WebAIM Training



WebAIM's WCAG 2 Checklist

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Last updated: Jun 20, 2024

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Related Resources

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Web Accessibility InitiativeWAI

Strategies, standards, resources to make the Web accessible to people with disabilities

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