

# AccessGA: a Statewide Digital Accessibility Initiative

**Presenters:**

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# Center for Inclusive Design & Innovation

- Center for Inclusive Design & Innovation (CIDI) provides practical solutions for challenges faced daily by individuals with disabilities.
- We focus on solutions that offer utility, usability, and durability.
- CIDI offers services including disability compliance consultation, braille, captioning, accessible digital content, and assistive technology.



# CIDI Services

## Digital Accessibility Testing & Compliance

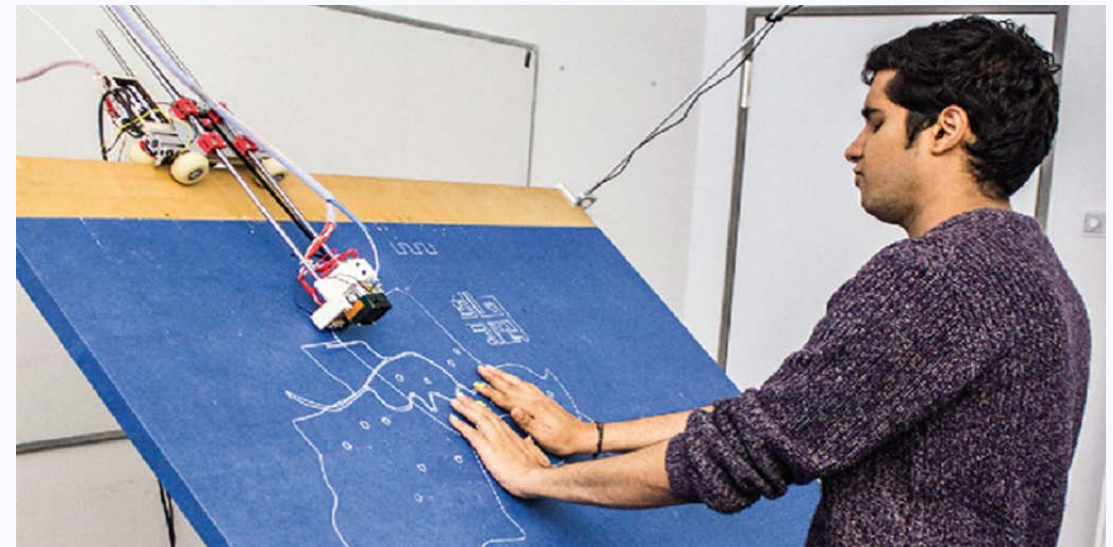
- Training
- Technical assistance
- Evaluation of website and application accessibility
- Usability testing





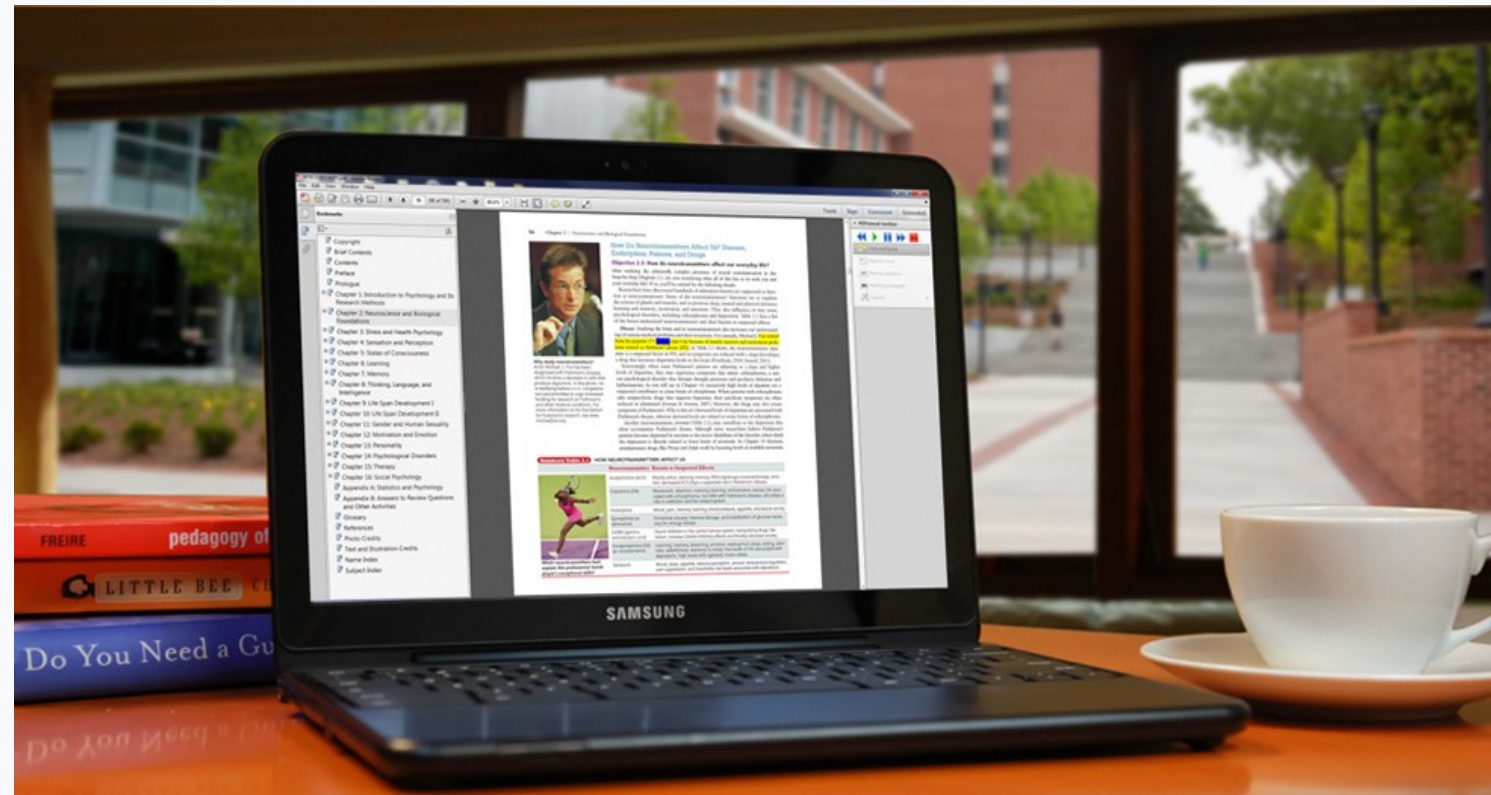
# Print and Text Services

- [Braille Services](#) produce high-quality electronic or embossed braille and custom tactile graphics.



# E-text Services

- [E-text Services](#) produce and [provide](#) high-quality e-text in formats such as PDF, DOC, PPT, DAISY, EPUB, and HTML.





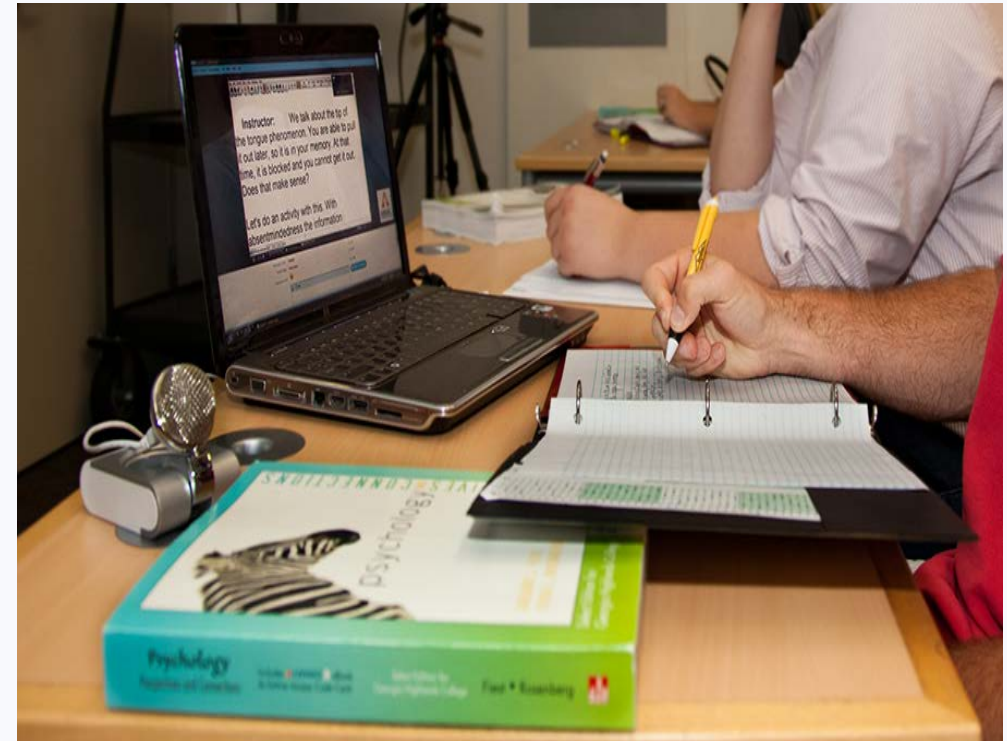
# Tools for Life

- The [Certified Assistive Technology Team](#) conducts on-site or remote assessments and offers demonstrations, training, and assistive technology for learning, work, and daily living.
- The AT team hosts Georgia's [Assistive Technology Act](#) program, [Tools for Life](#).



# Captioning Services

- [Captioning Services](#) provide **real-time remote live-captioning** for college lectures, seminars, and labs, as well as special events such as conferences, graduations, and workshops.
- We also provide professionally edited **post-production transcription and closed captioning** for pre-recorded content.





# Audio Description Services

- CIDI's [Audio Description Services](#) narrate and [describe](#) the visual components in multimedia to accommodate persons who are blind or low-vision.





# Accessibility Research

- Our research primarily focuses on students with disabilities, who are traditionally underrepresented in higher education.
- Disability spans across all age, gender, ethnic, racial, cultural, and socio-economic boundaries.
- CIDi also studies how corporate, government, and non-profit organizations support customers and employees with disabilities.



Disabilities: What does  
this mean? Who does it  
apply to?

# How People with Disabilities Use the Web

- Visual
- Auditory
- Mobility
- Cognitive and Neurological
- Speech





# Living with a Disability

According to the CDC, 1 in 4 adults in the US are living with a disability that can affect their ability to:

- see
- hear
- communicate
- reason
- walk
- perform other basic life functions



**CENTERS FOR DISEASE  
CONTROL AND PREVENTION**

# Legal Landscape

# Lack of IT Accessibility in the ADA

- The ADA was not intended by disability advocates or its framers to apply to information technology.
- Largely, this was because most information technology at the time was text-based, and largely accessible.

**ADA**  
Americans with  
Disabilities Act



# Title I Issues

- Title I of the ADA requires employers to make “reasonable accommodations” for job-seekers with disabilities.
- This could include making online job applications and career websites accessible.

# Title II Issues

- Title II of the ADA requires that state and local governments provide “program access” for people with disabilities.
- If state and local government websites are a “program,” it could be argued that they would need to be accessible, absent an undue burden.

# Title III Issues

- Title III of the ADA states that “places of public accommodation” shall be accessible.
- A great deal of time and energy has been devoted to defining “place.”



# U.S. Justice Department and Digital Accessibility

## DOJ Excerpt from technical document entitled “Effective Communication”

The ADA requires that title II entities (State and local governments) and title III entities (businesses and nonprofit organizations that serve the public) communicate effectively with people who have communication disabilities. The goal is to ensure that communication with people with these disabilities is **equally effective** as communication with people without disabilities. [U.S. Department of Justice document \(2014\)](#)



AccessGA and WAG

# What is AccessGA?

[AccessGA](#) is a joint initiative of the State of Georgia ADA Coordinator's Office, CIDI, and the [Georgia Technology Authority](#) (GTA).

The objective is to support Georgia state agencies that strive to provide equitable and timely access to their employees, students, and clients with a wide range of disabilities.



## Benefits and Services Include...

- Access to live monthly webinars and archived [webinars](#)
- Technical assistance and hands-on training
- Web accessibility evaluations and resources
- Periodic [newsletters](#)
- Up-to-date [wiki](#) of ICT accessibility resources and information
- Special events

# WAG - Web Accessibility Group

## Monthly Webinars

- Housed at the Center for Inclusive Design & Innovation (formerly AMAC Accessibility) at Georgia Tech
- First Wednesday of most months
- Focus on web accessibility for higher-ed
- WAG listserv discussion and technical guidance
- WAG website <http://www.amacusg.org/wag>
- Its purpose is to bring together individuals in Higher Ed seeking to navigate the complex requirements of state and federal accessibility standards and guidelines.

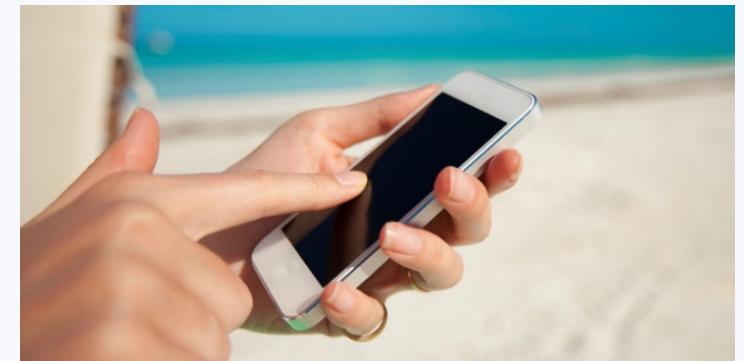
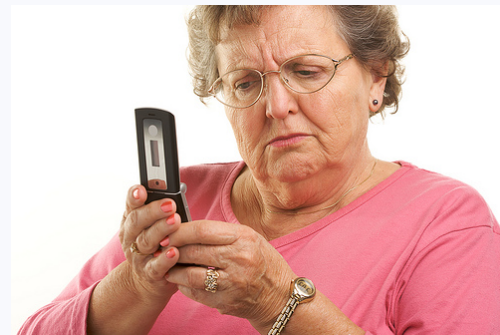


# Screen Reader Demo



# Mobile More Important Than Ever

- Noisy Spaces
- Using One Hand
- Outdoor use in bright light
- Small-sized touchscreens
- Multitasking-Driving or Walking
- All Ages Using Mobile





# Digital Accessibility Standards & Guidelines

# ICT Refresh (Section 508 Refresh) and Harmonization with WCAG 2.0

- U.S. Access Board Final Rule published Jan. 18, 2017
- Harmonized with WCAG 2.0
- Safe Harbor: Legacy ICT that has not been altered after compliance date
- Many state and local governments have adopted the ICT Refresh and/or the WCAG standards as statutes, regulations, or policies



# Web Content Accessibility Guidelines (WCAG 2.0/2.1)

- Web Content Accessibility Guidelines (WCAG 2.0/2.1) are a series of guidelines for making web content accessible for all users, especially those with disabilities.
- The full current version of WCAG 2.0/2.1:  
<https://www.w3.org/TR/WCAG21/>



# WCAG 2.0 Level A, AA, & AAA

## Level A

**Essential requirements to meet,** otherwise it will be impossible for one or more groups to access the web content.

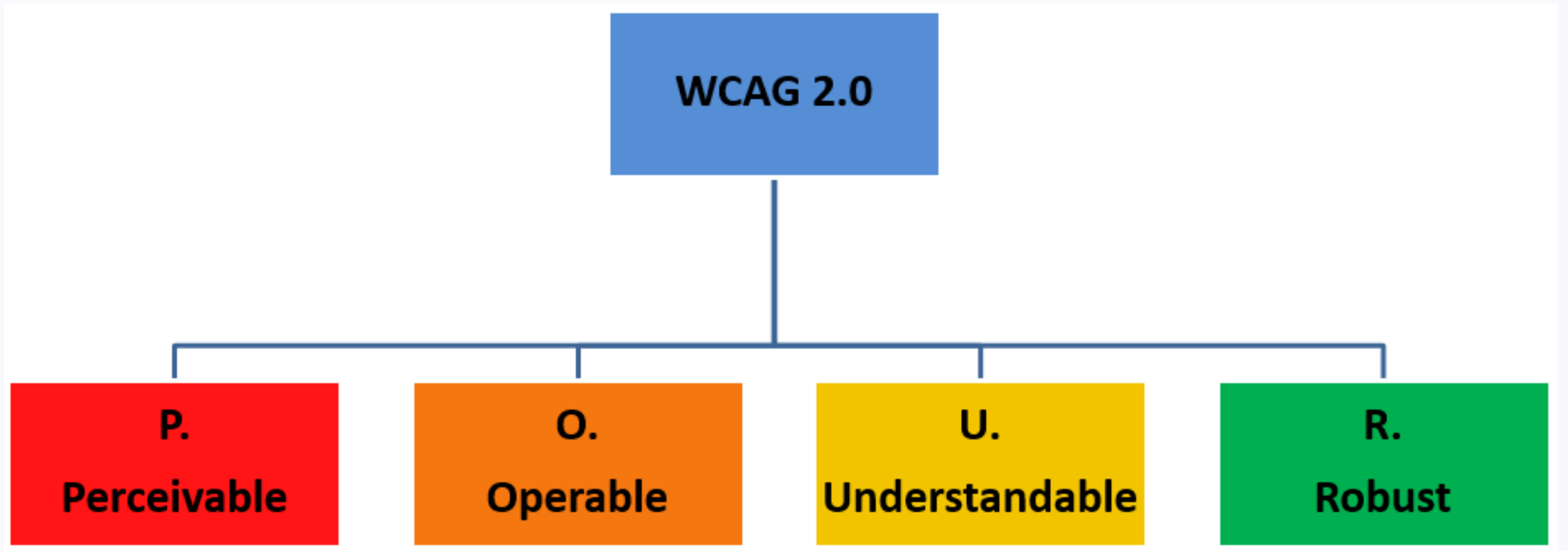
## Level AA

**Necessary requirements to meet,** otherwise some groups will find it difficult to access the web content.

## Level AAA

**Best practice:** In order to make it easier for some groups to access the web content.

# Basic Principles of WCAG 2.0/2.1



# Then Along Comes WCAG 2.1

Expands Provisions for WCAG 2.0 that includes:

- ✓ Mobile
- ✓ Low Vision
- ✓ Cognitive/Learning Disabilities

# Testing for Accessibility

A Combination of  
Automated and Manual Testing

# Where Do I Start???

- A wide array of AT Products
- Lack of experience using AT
- So many browsers, operating systems and devices





# Commonly Used Screen Readers

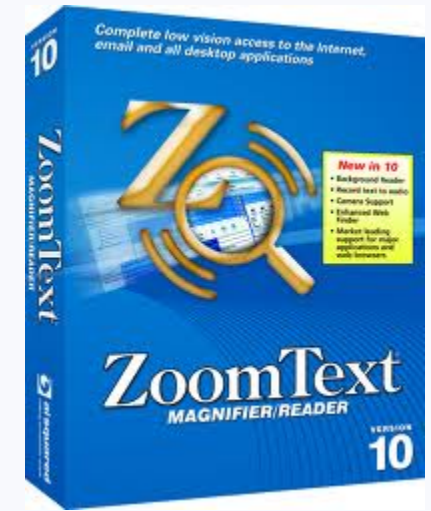
## Common AT Testing Tools for Desktop/Laptop

- JAWS
- NVDA
- VoiceOver for the Mac



# Screen Magnification Programs

- MAGic
- ZoomText
- Windows Magnifier
- Mac Zoom
- Zoom and Magnifier (iOS & Android)



# Step Away from the Mouse!

- Keyboard Accessibility Covers a Multitude of Sins
- Tab and Reading Order
- Visual Focus
- Interactive Form Controls
- Keyboard-Triggered Event Handlers



# Why Test with Screen Readers?

- Critical stops abound for inaccessible sites
- Accessibility for screen readers = Accessibility for many other AT solutions
- Liability and powerful advocacy groups

# NVDA: Pros and Cons

## Pros:

- FREE!!! – Open Source
- Lightweight: fewer system resources used
- Frequent Updates: Quarterly

## Cons:

- Lack of technical support
- Lacks compatibility with 3rd party applications
- Less frequently used in education and workplace than paid screen readers
- Poor quality synthesizer by default



# JAWS: Pros and Cons

## Pros

- Largest market share
- Excellent Technical Support
- Extensive scripts developed for 3rd party applications

## Cons

- Expensive
- Tries to fill in “Accessibility Gaps” – Problematic for testing
- Lack of portability/versatility with installation

# Automated Testing Tools

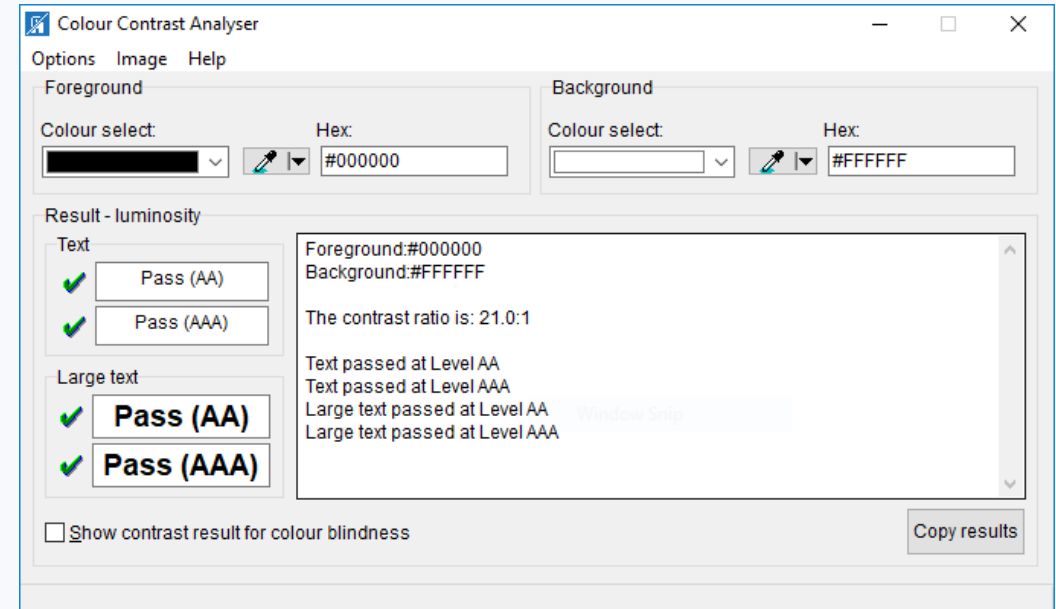
The Other Half of Testing for Accessibility

# Automated Tools for Testing

- Color Contrast Analyzer
- Bookmarklets
- Web Developer Extension by Chris Pederick
- Nu-Validator
- HTML Code Sniffer
- aXe by Deque
- WAVE

# Color Contrast Analyzer

- Helps determine the legibility of text and the contrast of visual elements
- Includes WCAG 2.1 compliance indicators
- Color blindness simulator



# Bookmarklets

- Uses JavaScript to highlight roles, states, and properties of accessibility elements

- Forms Bookmarklet
- ARIA Bookmarklet
- Lists Bookmarklet

```
<li> About </li> <li> Academics </li> <li> Admissions </li> <li> Visitors </li> </ul>
```

**Apply Now!**  
(required fields are in blue)

Name:

Email:

City:

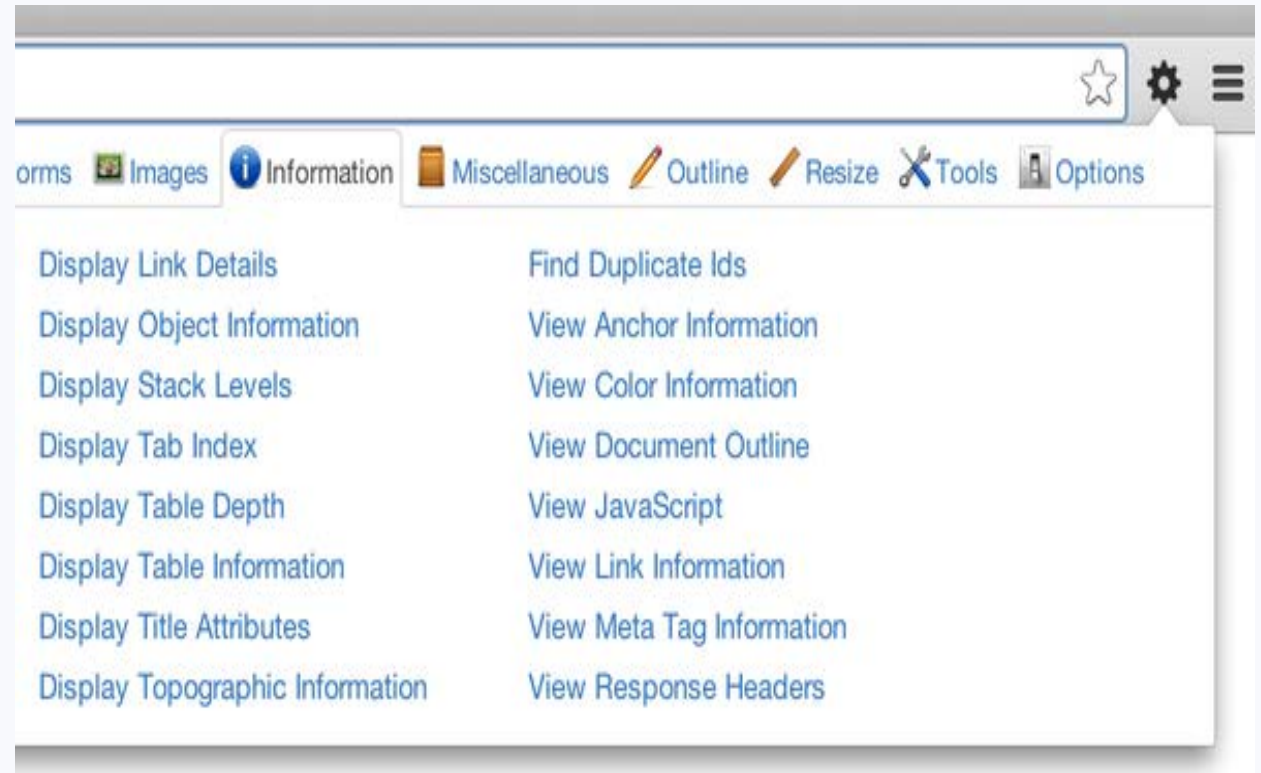
State/Province:

Zip/Postal Code:

Country:

# Web Developer Extension

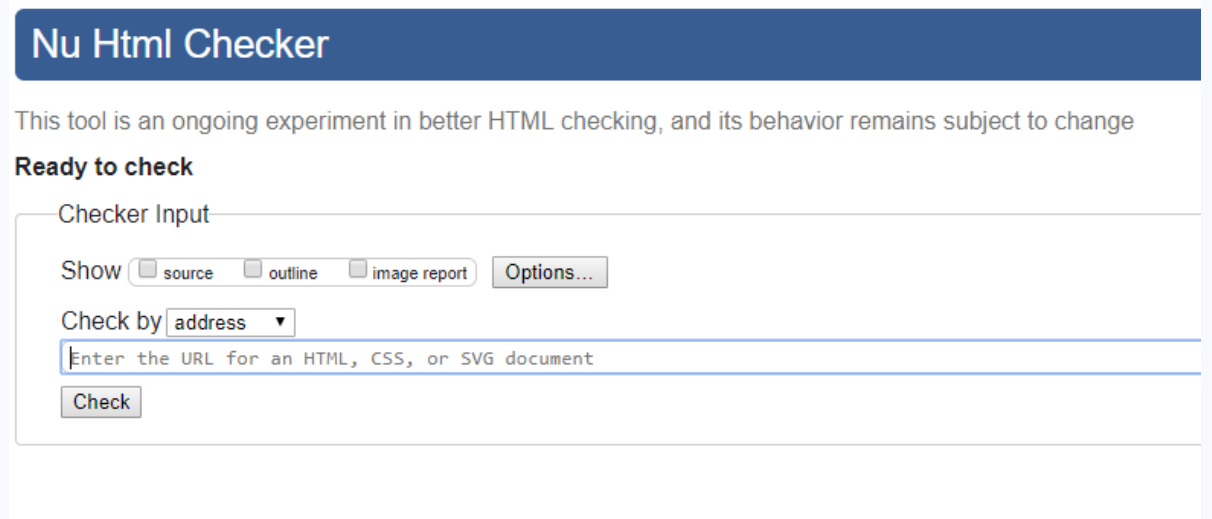
- Adds a plethora of web developer tools to your browser





# Nu Validator

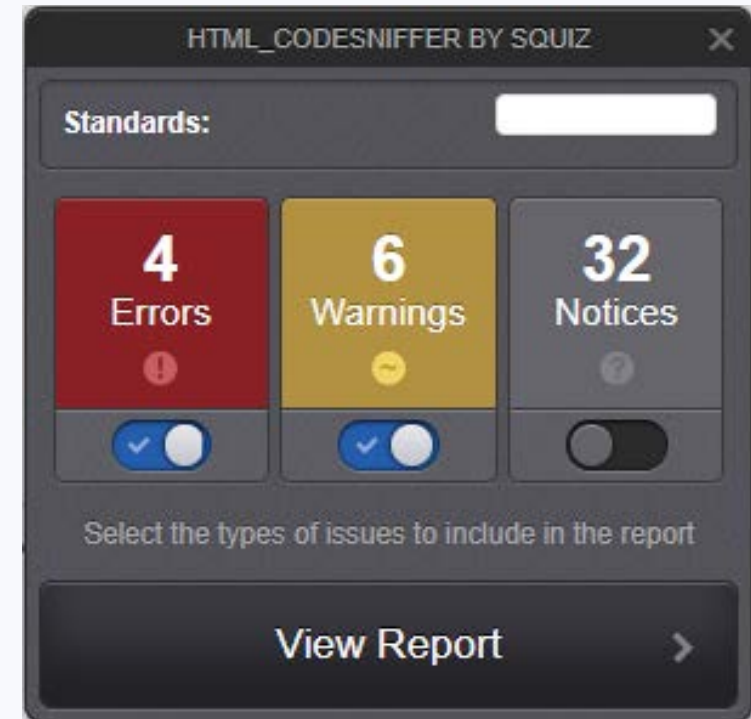
- Assists users with validating code and detecting issues



The screenshot shows the Nu Html Checker interface. At the top, there is a blue header with the text "Nu Html Checker". Below the header, a disclaimer states: "This tool is an ongoing experiment in better HTML checking, and its behavior remains subject to change". The main section is titled "Ready to check" and contains a "Checker Input" box. Inside this box, there is a "Show" section with three checkboxes: "source", "outline", and "image report", followed by an "Options..." button. Below this is a "Check by" dropdown menu currently set to "address". A text input field below the dropdown contains the placeholder text "Enter the URL for an HTML, CSS, or SVG document". At the bottom of the input box is a "Check" button.

# HTML Code Sniffer

- Checks HTML source code and detects violations



- Tests for accessibility issues that can be accurately detected

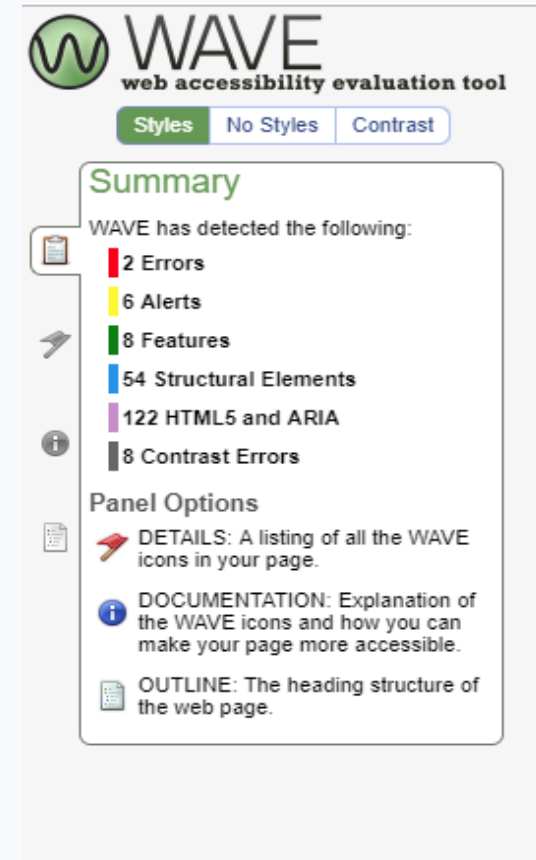
The screenshot shows the aXe accessibility testing tool interface. The top navigation bar includes 'Elements', 'Console', 'Sources', 'Network', 'Performance', 'Memory', 'Application', 'Security', 'Audits', 'AdBlock', and 'axe'. The 'axe' tab is active, displaying a list of accessibility issues on the left and a detailed view of the selected issue on the right.

Issue	Count
ARIA role must be appropriate for the element	2
Page must have one main landmark	1
Page must contain a level-one heading	1

**Issue details:**

- Issue title:** ARIA role must be appropriate for the element
- Issue description:** Ensures role attribute has an appropriate value for the element
- Impact:** minor
- Element location:** header
- Element source:** (empty)

- Provides visual feedback by injecting icons and indicators into your page



The screenshot shows the WAVE web accessibility evaluation tool interface. At the top, there is a logo for WAVE (web accessibility evaluation tool) and three buttons: "Styles", "No Styles", and "Contrast". Below this is a "Summary" section with a green heading. The summary text reads: "WAVE has detected the following:" followed by a list of items with corresponding colored bars: 2 Errors (red), 6 Alerts (yellow), 8 Features (green), 54 Structural Elements (blue), 122 HTML5 and ARIA (purple), and 8 Contrast Errors (grey). Below the summary is a "Panel Options" section with three items: "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.", and "OUTLINE: The heading structure of the web page." Each item has a small icon to its left.

# Web Accessibility Evaluation

- Excel spreadsheet with a listing of WCAG 2.0/2.1 success criteria issues identified on each evaluated web page, impact of the issue on users, level of effort to fix, and recommendations.
- Word document including Executive Summary of WCAG 2.0/2.1 AA Success Criteria conformance, detailed samples of issues identified for each Success Criteria out of conformance, impact to users and recommendations for remediation.
- Customized mp4 video describing the User Testing findings for your particular website or application, highlighting accessibility barriers found while navigating the website with assistive technology (AT).

# Types of Technical Assistance

- Conference Call
- Emails
- Screen Sharing



# Questions???

