



AI-Powered Alt Text Google Chrome Extension

CS 492 Project

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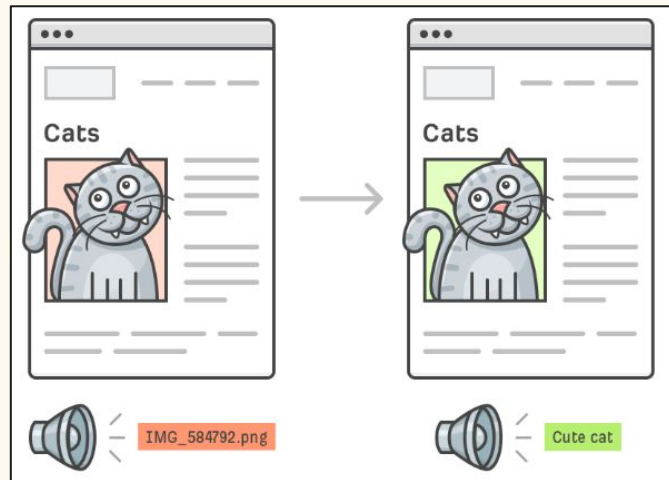
Context

The visually impaired often rely on screen readers to listen to a description of a webpage's content.

For images, HTML `alt` attributes provide a description of the image to be read to the user.

```

```





Background Research

- WebAIM Report on accessibility: 22.1% of images had missing alt text
 - 10.9% non-descriptive
- AI alt text: AI can be a good substitute for a human
- Existing Solutions: AltText.ai





Are Canadian governmental organizations complying with web accessibility guidelines?

Using a webscraper, we examined 75 websites and found that:

- Across all 75 websites, 88.0% of URLs were compliant.
- Within all 1133 images across 75 websites, 96% of images were compliant.
- Within all 1133 images across 75 websites, 44% of images had empty alt-text.








Limitation: Our definition of compliance is too broad!

1. Were images with empty alt-text decorative, or did they require non-empty alt-text?
2. Were non-empty alt-texts adequately descriptive?




Existing Solutions

- Vast majority of the alt text generator Chrome extensions don't update actual alt text
 - Just produce text that user can copy
- Caters to developers looking to improve SEO or accessibility of their website
- May in the long term improve internet accessibility by helping developers more easily update their images
- Visually impaired won't necessarily directly benefit from this in the short term

 The #1 Alt Text Generator	AltText.ai: Alt text generator alttext.ai  Featured 4.7 ★ (6) ⓘ Generate alt text for images using AI. Connects to your AltText.ai account.
	Alt Text Generator for Webflow 5.0 ★ (1) ⓘ Generate Alt Text for Webflow images using AI! This extension uses an open source AI model to analyze the images in your Webflow...
	Images Alt Text Generator prisakarui.it 0.0 ★ (0) ⓘ Describes images using AI, right-click on an image to get image description.
	GenAlt - Generate AI Alternate Text 4.5 ★ (48) ⓘ GenAlt generates descriptive alternate text of images online for those who need them!
	Webflow Extension by Peeks  Featured 3.7 ★ (10) ⓘ Boost your productivity on Webflow with our tools, including AI-powered automatic Alt text generation.



Demo



Alt Text Filler

Add alt-text to all images on current webpage

OpenAI API Key

Settings

Overwrite existing alt tags ☐

Include color in description ☒

Extra detailed description ☒







1 (Best)

2

3 (Worst)

Chipmunk emerging
from a hole in the
ground surrounded
by dried grass and
leaves.

☐☐☐

Eastern chipmunk
peeking out of
burrow.

☐☐☐

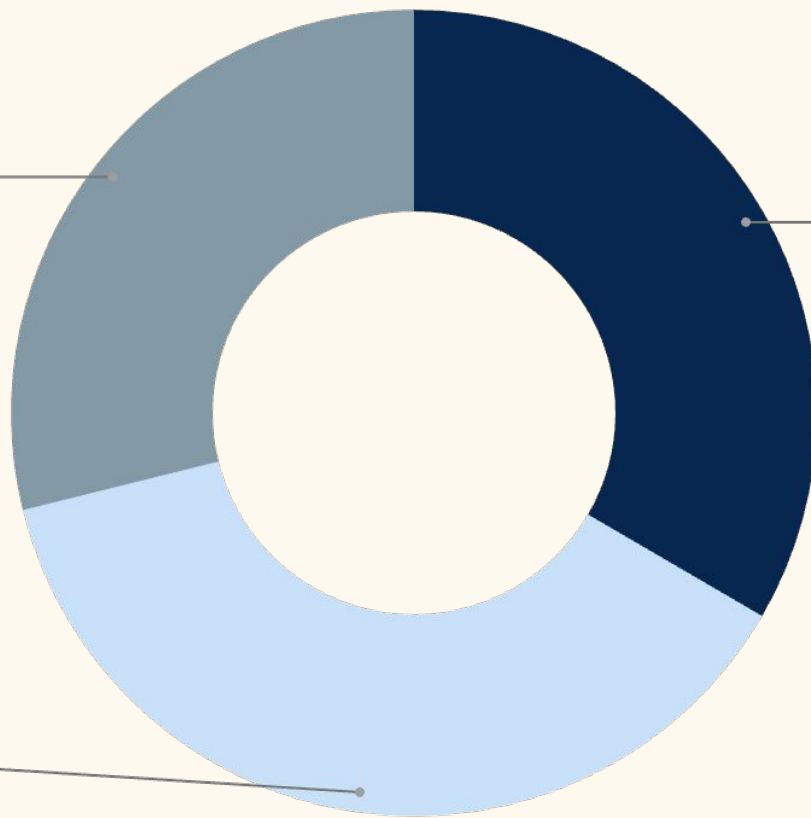
A chipmunk emerges
from a hole in the
ground, with its front
paws resting on the
soil and its attentive
eyes looking
forward.

☐☐☐

ChatGPT 4
28.9%

Actual
33.4%

gpt-4-vision...
37.7%





Further Work

1. Research on Canadian governmental organizations' compliance with WCAG 2.0
 - a. Run webscraper on a larger set of websites
 - b. Applying a more stringent definition of compliance

2. Survey for gauging the effectiveness of our Chrome extension at generating alt-text





Complete our survey :)

Thanks for Watching!

Questions?