[Issue #10](#) (open): [REVIEW] [Accessibility]

@domoritz on Jul 05, 2024 21:24:

[opened]

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Reviewed version

b0a22fb

Perceivable

- ☐ Contrast of all text and elements is sufficient. Geometries and large text must have >3:1 contrast against background. Regular text must have >4.5:1.
- ☒ Content has non-visual alternatives. All figures have alt text and videos have transcripts. Equations are screen reader accessible.
- ☒ Font sizes for all texts are sufficiently large. Text must not be smaller than 9pt/12px in size. Ideally only minor text is rendered at 9pt (e.g., axis labels) while all other text is larger.
- ☐ Where possible within reason, the article works even if I could not perceive colors. Colors should be augmented with patterns, textures, other visual cues, or tooltips if possible.
- ☒ The article can be navigated comfortably with a screen reader. There are no unnecessary accessibility elements (e.g., axis ticks and labels) that clutter the screen reader experience.

Screen reader

- ☒ VoiceOver on macOS
- ☐ VoiceOver on iOS
- ☐ NVDA on Windows
- ☐ JAWS on Windows
- ☐ Not tested with a screen reader (explain below why not)

Browser

- ☒ Safari or other WebKit-based browser
- ☐ Chrome or other Chromium-based browser
- ☐ Firefox

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Comments on Perceivable

The contrast of the link text is too low.

Definition

([Adapted from Wikipedia](#))

Let X be a data space. This could be as s
space of all images or the space of all snip

The game uses colors (red and green) to distinguish classes. red and green are particularly bad since many people cannot distinguish them. Replace with circles and x symbols

Welcome to the Four Germans Game!

TEST!
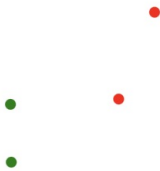
The buttons are missing alt texts.
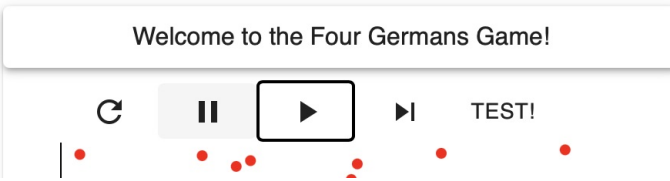
This image misses alt text.

With my window size, the chart goes off screen. Make sure the chart is responsive.

Welcome to the Four Germans Game!

TEST!

Total Training Error: 0.00%

TP %:	FP %:
0.00%	0.00%
FN %:	TN %:
0.00%	0.00%

Total Testing Error: 0.00%

TP %:	FP %:
0.00%	0.00%
FN %:	TN %:
0.00%	0.00%

Operable

- ☒ If there are interactive elements in the article, they can be operated with a keyboard.
- ☒ If there are interactive elements in the article, there are textual instructions for how to use them or it's reasonable to assume that it's clear how to use them.
- ☒ When navigating over the article with a keyboard, the focus indicator is always visible.
- ☒ Interactions that work with a mouse also work on a touch screen (unless explicitly called out).

Comments on Operable

Looks good overall.

Understandable

- ☒ All charts have a title and a description.
- ☒ Changes in animated or interactive elements are easy to follow.
- ☒ All axes have clear labels (either explicit or implicitly given the context).
- ☒ There are legends for all charts that need them.

Comments on Understandable

No charts.

Robust

- ☒ All buttons use the `button` tag.
- ☒ Headings, paragraphs, and figures are tagged correctly.

Comments on Robust

Looks good.

Assistive

- ☒ The data density of all charts is appropriate. Use clustering or other data reduction techniques if elements compete for space but explain the method.
- ☒ Navigation and interaction feels intuitive with all interaction methods (mouse, keyboard, touch).
- ☒ All visually apparent features and relationships are described.
- ☐ Formatting makes values human-readable. Use , or space to separate thousands. Align numbers to the right. Use the smallest, appropriate number of significant digits.

Comments on Assistive

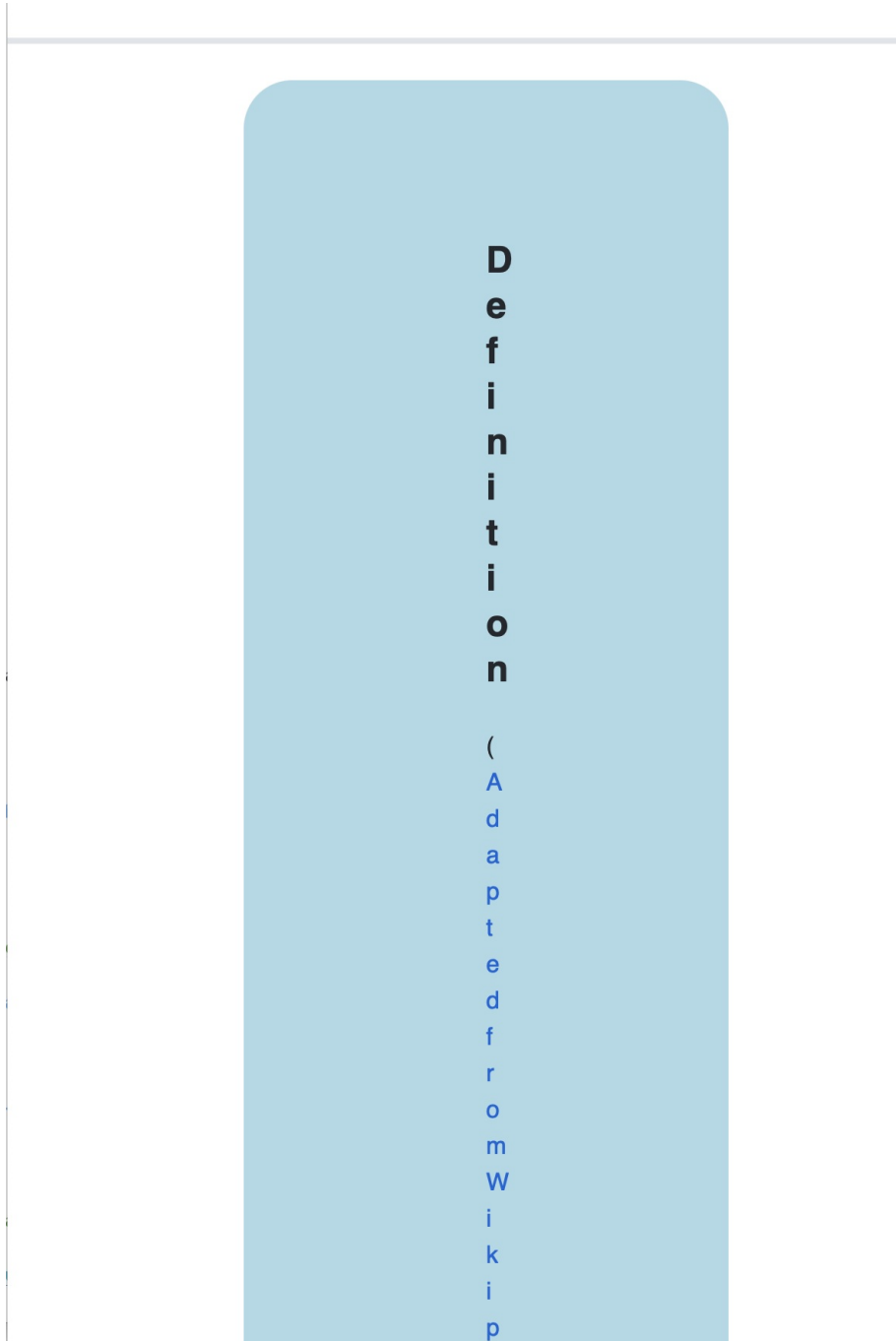Probably don't need that much accuracy (1% accuracy is probably enough).

Total Training Error: 0.00%		Total Testing Error: 0.00%	
TP %:	FP %:	TP %:	FP %:
0.00%	0.00%	0.00%	0.00%
FN %:	TN %:	FN %:	TN %:
0.00%	0.00%	0.00%	0.00%

Flexible

- ☐ The article is readable on a phone.
- ☒ The article can be zoomed and font-sizes change appropriately. The layout of the page does not break when zooming in or changing the font size (e.g., using CMD + or CMD - on macOS).
- ☒ Long animations (if they exist) can be paused or stopped. Animations should be videos, not GIFs as they cannot be paused.
- ☒ Style and charts use a consistent and familiar design (fonts, colors, etc). Interaction defaults should be consistent for all interactive elements.

Comments on Flexible

The layout overall looks pretty broken on my phone. Try the article with different screen sizes.

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Thank you for your review! I wanted to clarify what revisions that I made. I used the required revisions

list from the meta-review, so I made the following changes:

> Some colors may be low contrast/difficult to perceive (especially red and green points in the game). When possible, avoiding reliance on colors is recommended.

Double encoded the red/green points with different symbols

> Some icons and buttons are missing alt text.

I believe that I have added alt text to the buttons in https://github.com/journalovi/2024-Cashman-PAC-learning-game/pull/14: image

> The article does not appear to be responsive to different window sizes or form factors (such as reading from a phone).

I don't think that I can make the article readable on a phone. Would it be possible to have the article be restricted to desktop format?

Not supporting phones isn't great but I guess acceptable if you put a big warning at the top that appears on small screens (using media queries) or setting a minimum width on the body (maybe try that first).