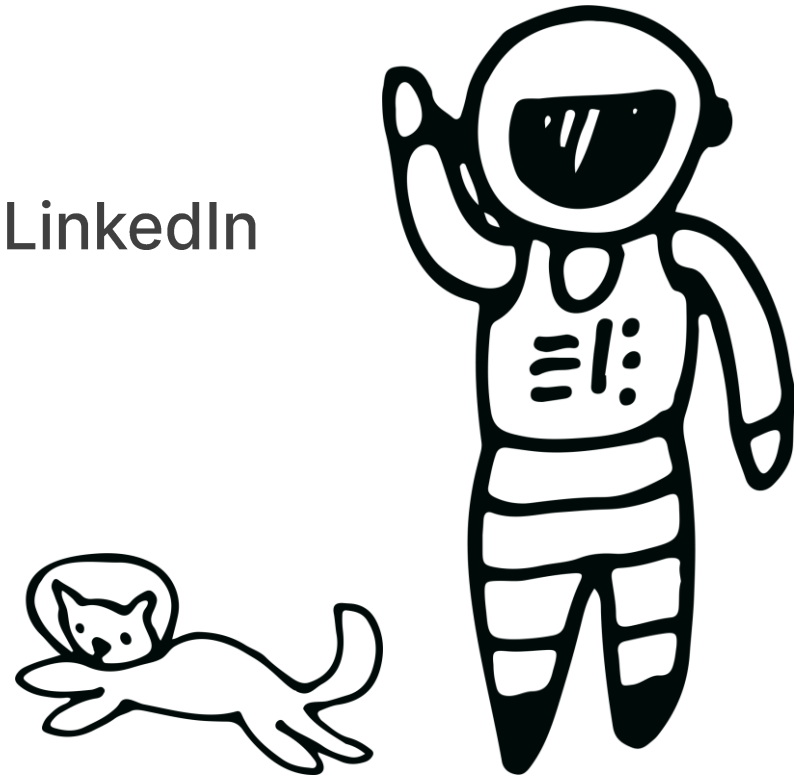


The Phenomenon of the Unlucky Choice

whoami

- Disabled, decorated US Navy Veteran
- Senior Software Engineer & A11y SME at LinkedIn
- Ember.js core team member
- Judge, CSS Design Awards
- This talk:

<https://noti.st/melsumner/6VELRY>



Remove frustration from the world.



@melaniersumner



State of Web Development

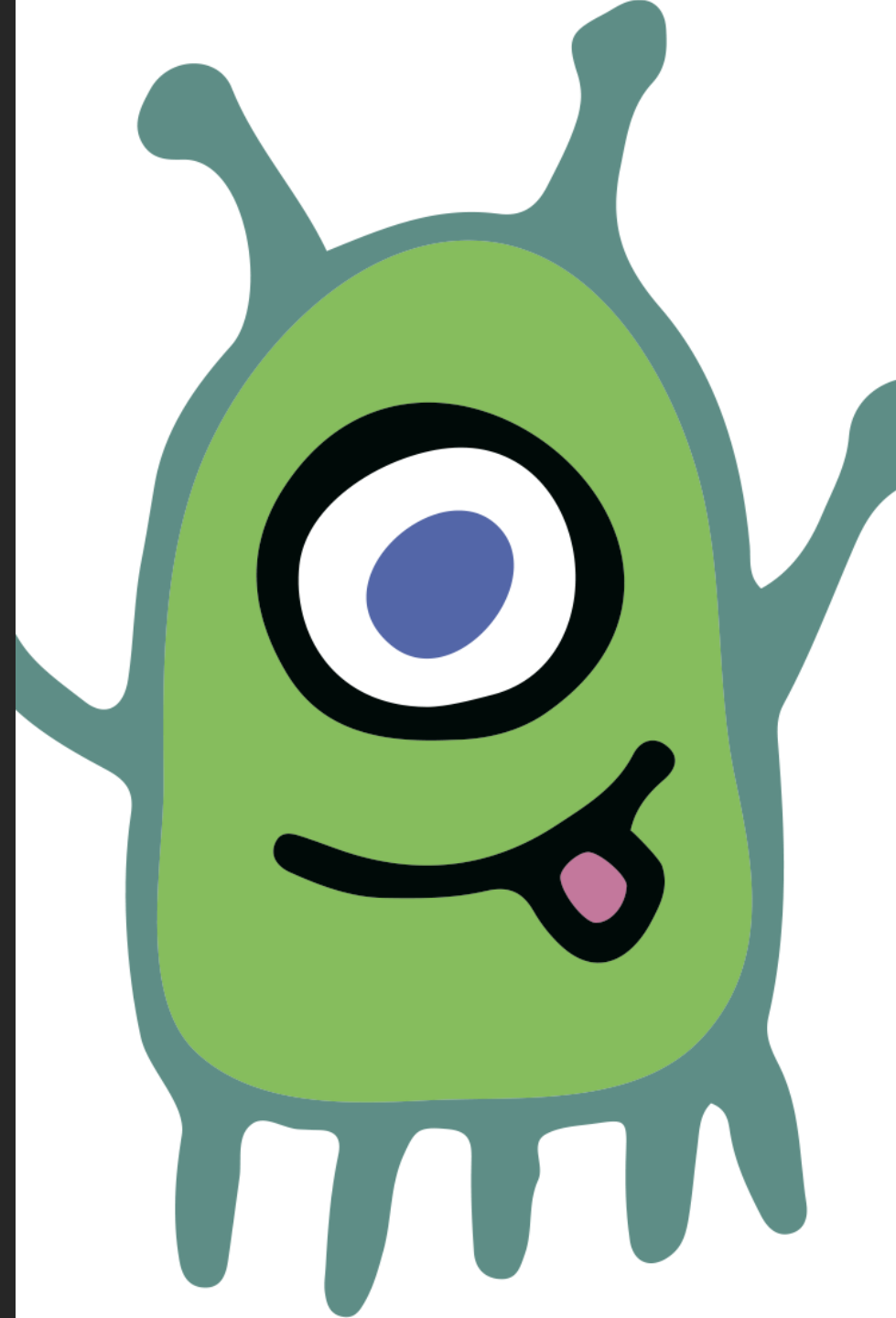
@melaniersumner

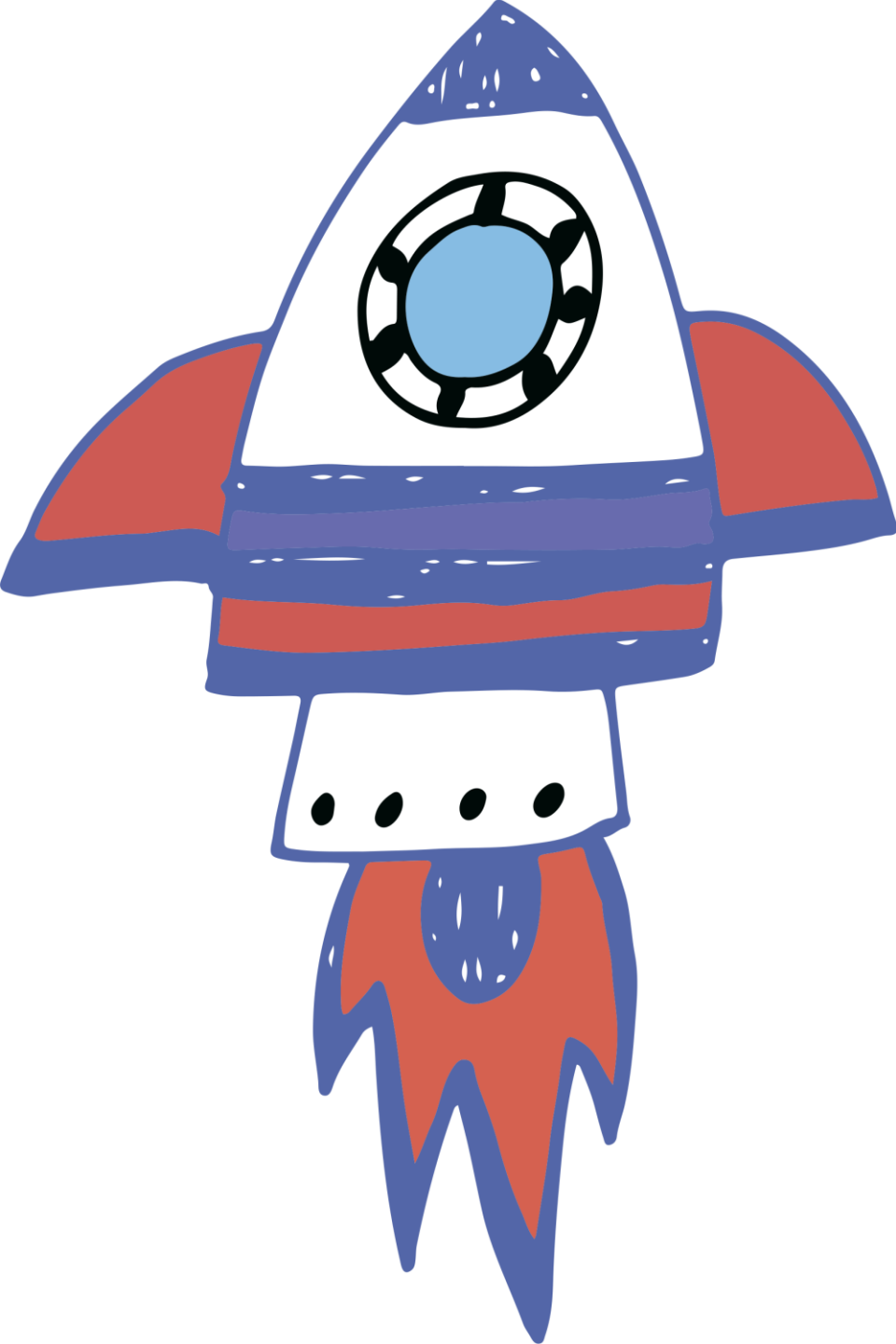
A backwards-compatibility guarantee
shouldn't be the exception

ember[®]

Front-end Developers

Too many front-end developers spend a chunk of their early career learning from anti-patterns.



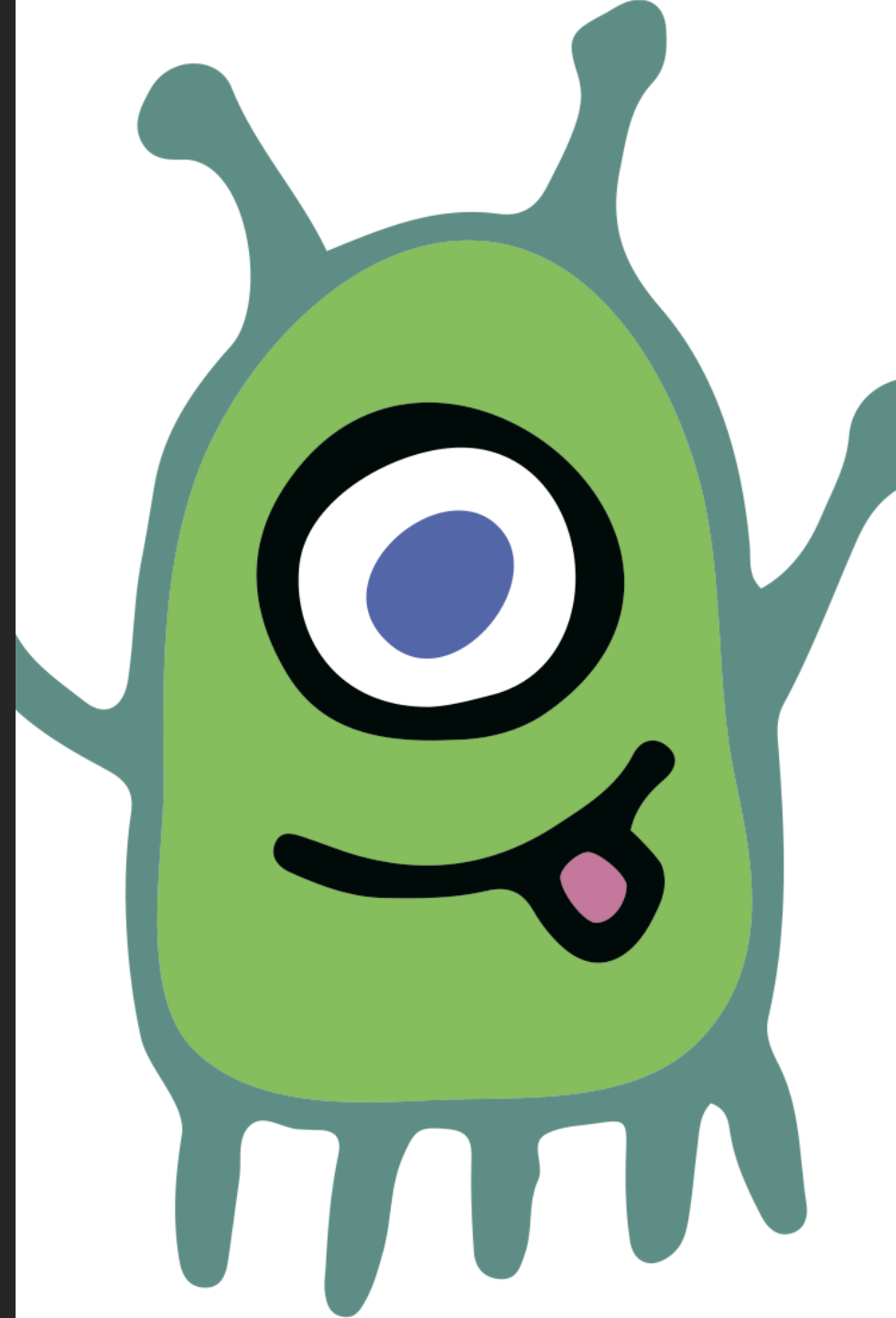


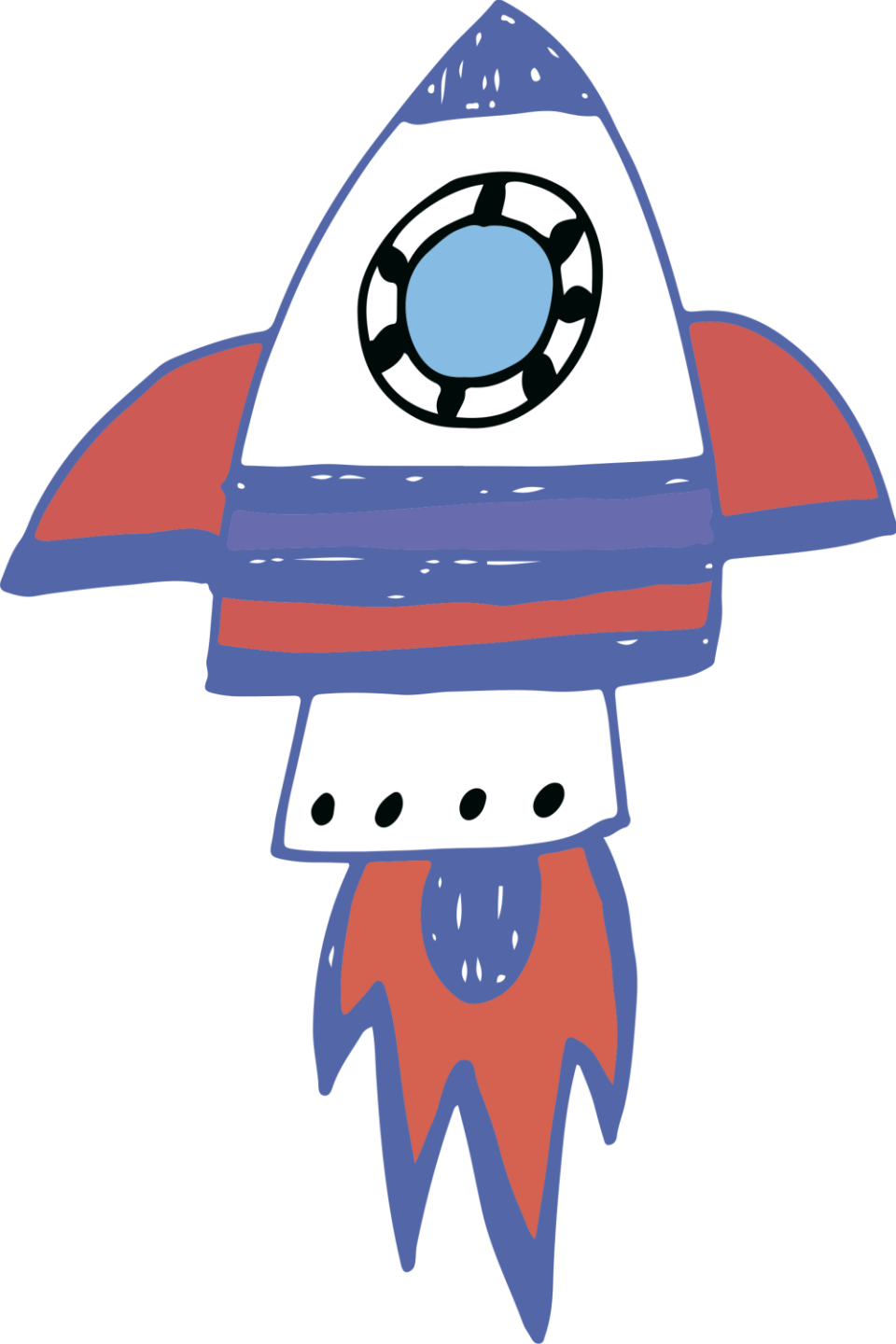
JavaScript Developers

Those developers then build addons. Useful addons to do useful things.

JavaScript Engineers

But ultimately, they are not useful addons because they are not accessible, which in turn perpetuates the myth that accessibility is hard.





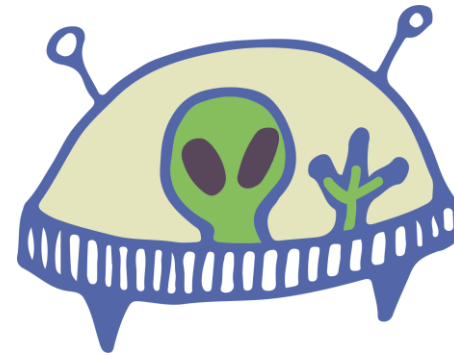
Ninja Rockstar Unicorns

Unintentionally, the developer is now perpetuating anti-patterns, feeding into the cycle that supports faux innovation

Innovation...?

**AMP is a web component framework
to easily create user-first ads.**

[Get started](#)

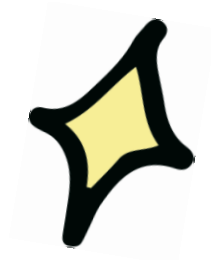


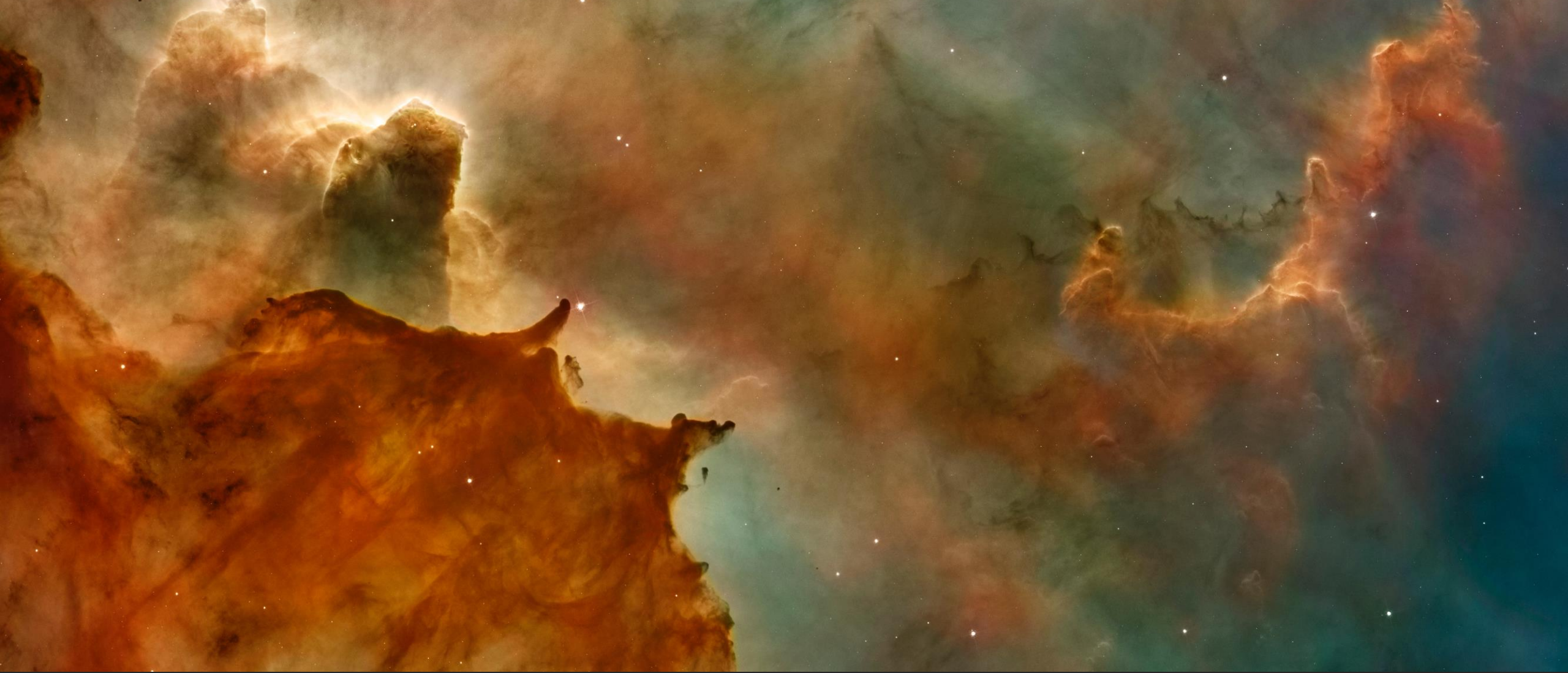
More capable form controls

With a new event, and custom elements APIs, participating in forms just got a lot easier.

Aug 8, 2019

HTML





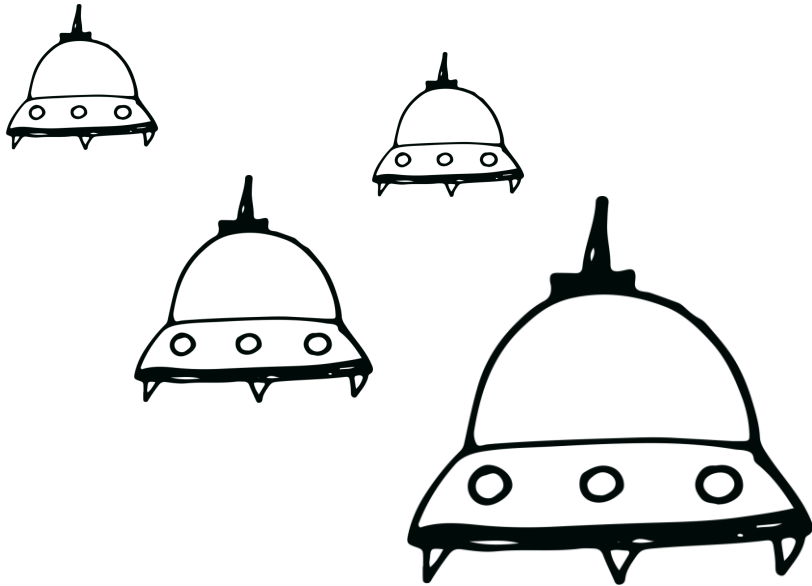
The Choices We Make

Chasing Aesthetics



Gray on Light Gray

When Muted Tones Attack

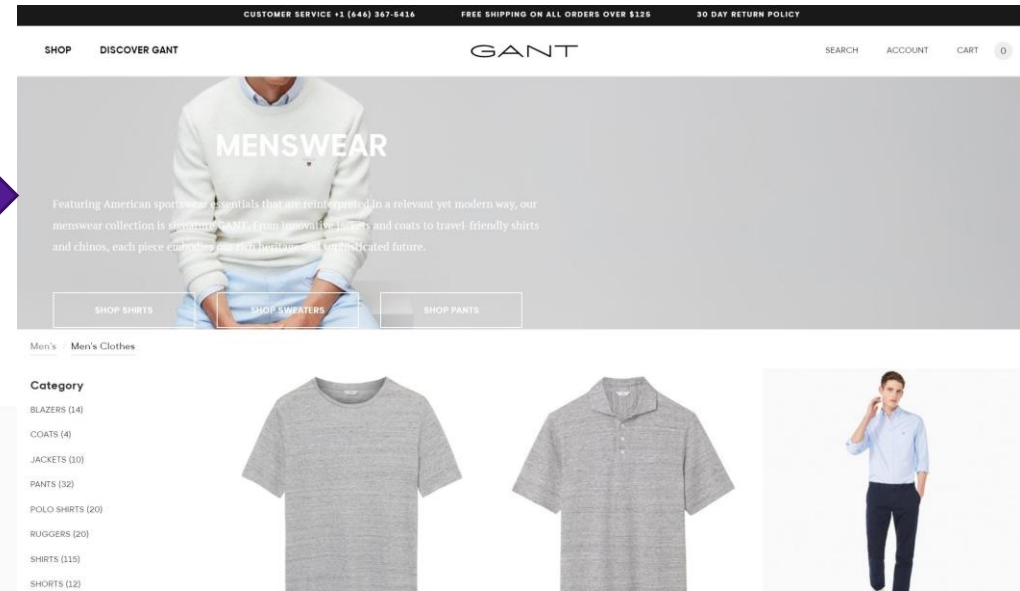


**So sleek! So modern!
Buy today!**



The Web Became Unreadable

White text on light gray backgrounds



Gray text on light gray backgrounds

We transparently build high-quality minimal watches from the finest components and materials.

Shop Now



Improve Contrast!



Step 1:
Incorporate color contrast
checkers

Step 2:
Add this information to your
styleguide!



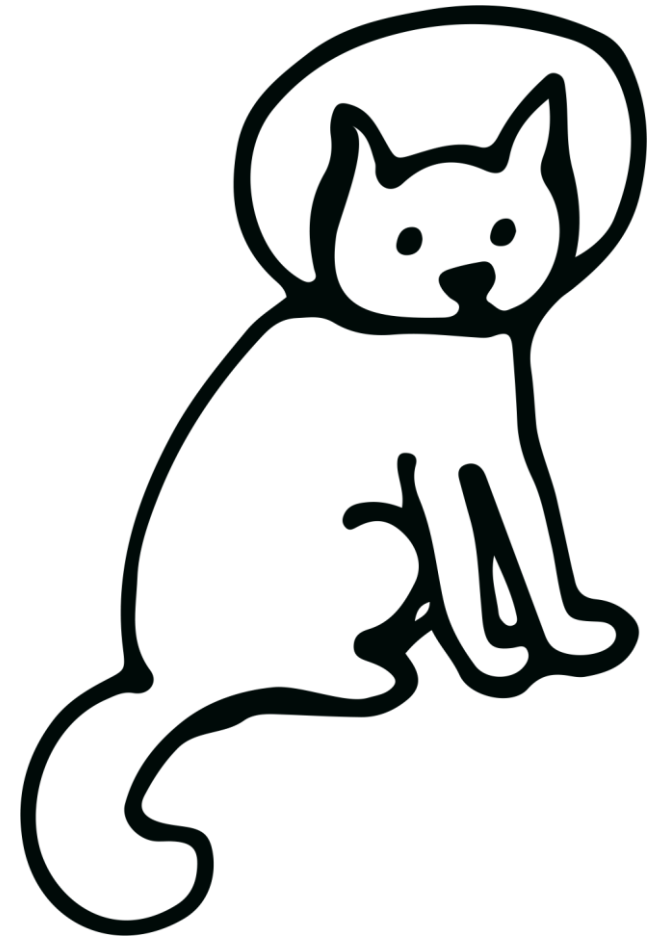
The screenshot shows a color contrast checker interface. The top section has a red background with five black boxes containing the letter 'A' in white. Below each 'A' is a black box with a white checkmark and a rating: AA✓, AA✓, AAA✓, AAA✓, and AAA✓. The bottom section has a white background with five black boxes containing the letter 'A' in black. Below each 'A' is a black box with a white rating: FAIL, FAIL, AA✓, AA✓, and AA✓. Below the checker is a light blue box containing the following information:

```
NAME  
Orange  
  
VARIABLE  
--color-orange  
  
CLASS NAME  
bg-orange  
  
RGB  
224, 78, 57  
  
HEX  
#E04E39
```



Real Conversations

We must be willing to call these things out in our teams – responsibility is on **EACH of us** to be willing to have the conversations necessary to create inclusive products- even if those conversations are difficult.





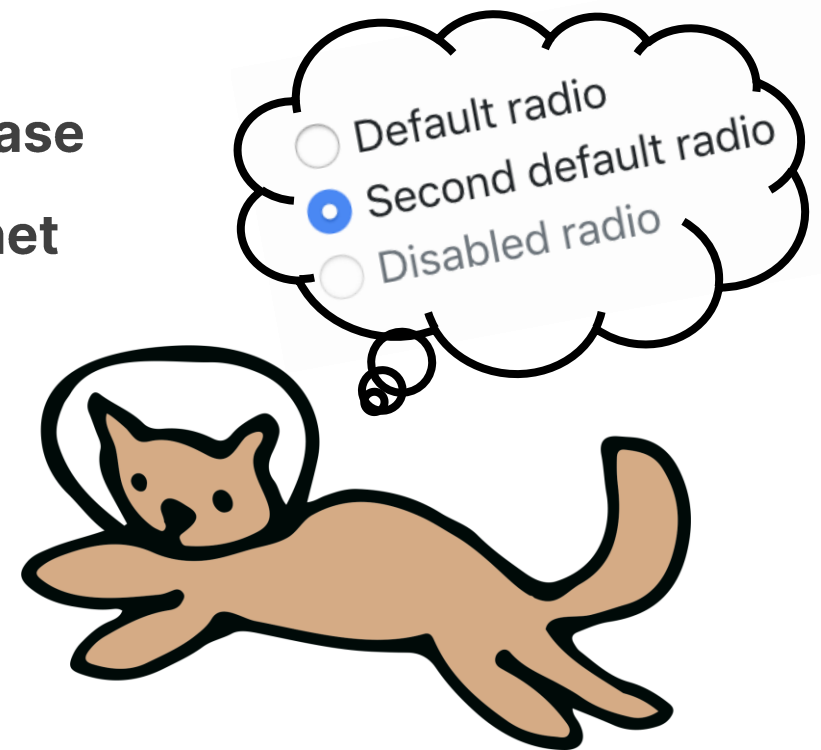
“Pretty” Radio Buttons

New Feature Request

We'd like a new option added to our super-awesome form!

Here are some specs:

- radio buttons for the options
- not one of those ugly radio buttons, a pretty one please
- attached are some ideas that we found on the internet



Quick! Make A Choice!

” I’ll just find one that
already exists to
save time!



”

Big Tech Co made
it, so it must be
great!





```
1 <div class="mdc-radio">
2   <input
3     class="mdc-radio__native-control"
4     type="radio"
5     id="city-chicago"
6     name="city">
7   <div class="mdc-radio__background">
8     <div class="mdc-radio__outer-circle"></div>
9     <div class="mdc-radio__inner-circle"></div>
10  </div>
11 </div>
12 <label for="city-chicago">Chicago</label>
13
```

How much does that cost us?

HTML	CSS	JAVASCRIPT
6 elements	66 selectors	2,374 lines (unminified)
9 attributes	141 properties	30k minified
DOM depth of 3	10k minified	

**** h/t @ericwbailey**

@melaniersumner

Semantic HTML To The Rescue!

```
1 <fieldset>
2   <legend>City Preference</legend>
3   <div class="radio-button">
4     <input id="city-boston" name="city-preference" type="radio" value="boston">
5     <label for="city-boston">Boston</label>
6   </div>
7 </fieldset>
8
```

The CSS We Already Have Will Save Us

Preferred Location

Austin

Boston

Portland

<https://codepen.io/melsumner/pen/NQyQQX>

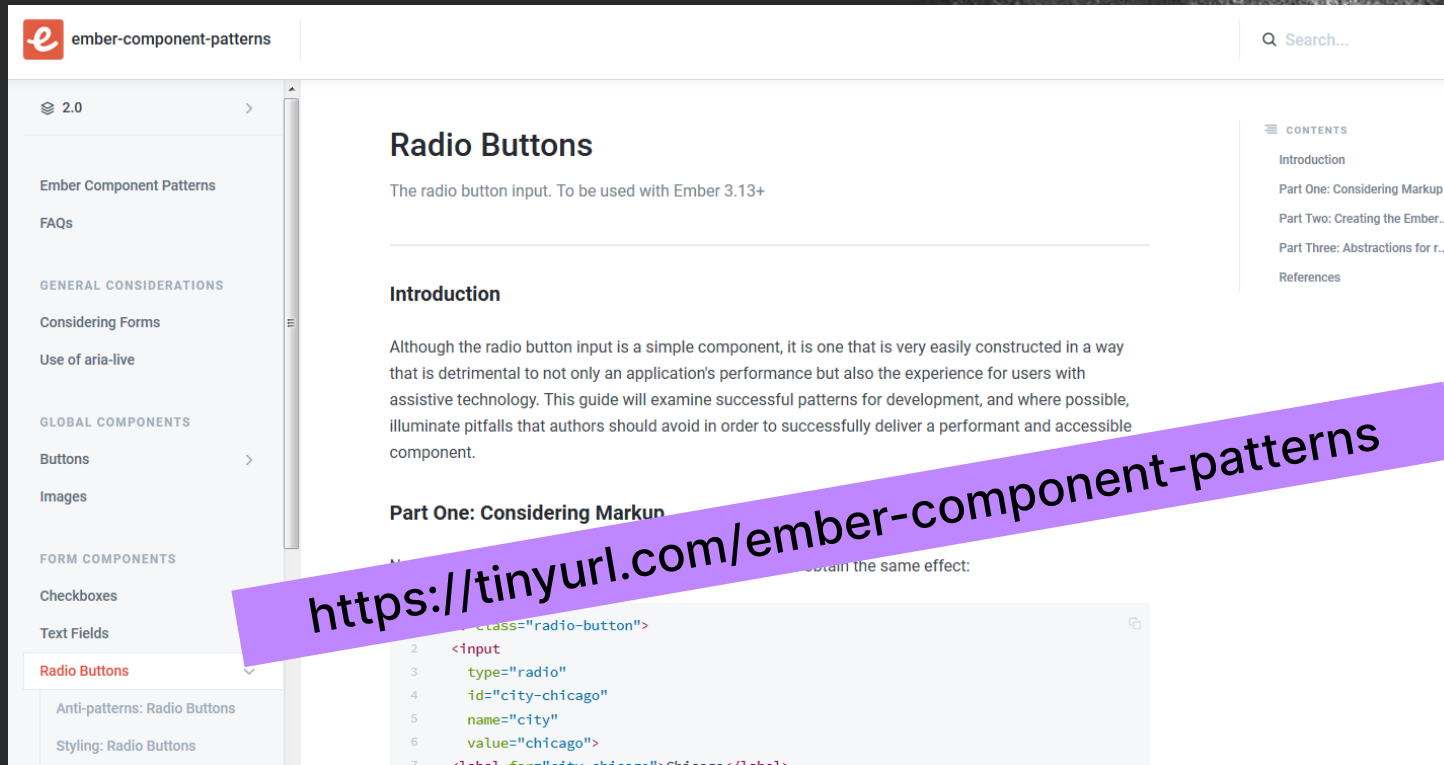
**** Thank you to @scotthara for writing about it!**

@melaniersumner

The Dark Side

We can't just give a pattern.

We have to teach the dark side, too.



ember-component-patterns

2.0

Ember Component Patterns

FAQs

GENERAL CONSIDERATIONS

Considering Forms

Use of aria-live

GLOBAL COMPONENTS

Buttons

Images

FORM COMPONENTS

Checkboxes

Text Fields

Radio Buttons

Anti-patterns: Radio Buttons

Styling: Radio Buttons

Search...

Radio Buttons

The radio button input. To be used with Ember 3.13+

Introduction

Although the radio button input is a simple component, it is one that is very easily constructed in a way that is detrimental to not only an application's performance but also the experience for users with assistive technology. This guide will examine successful patterns for development, and where possible, illuminate pitfalls that authors should avoid in order to successfully deliver a performant and accessible component.

Part One: Considering Markup

...contain the same effect:

```
1 <input type="radio" class="radio-button" />
2 <input
3   type="radio"
4   id="city-chicago"
5   name="city"
6   value="chicago">
7 <label for="city-chicago">Chicago</label>
```

<https://tinyurl.com/ember-component-patterns>



Lost in (web) space

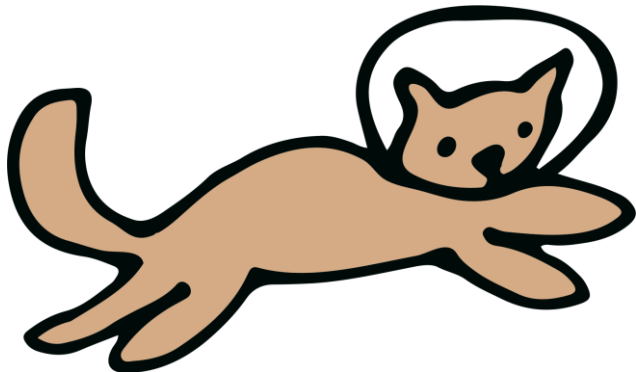


Missing landmarks

Unmarked.

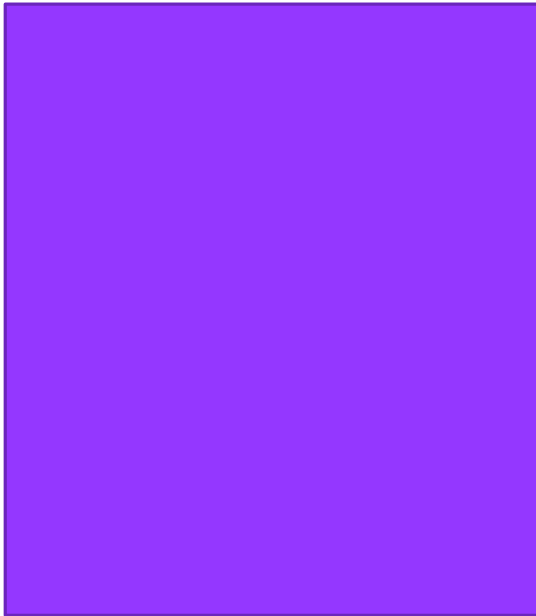


oh no
where am I

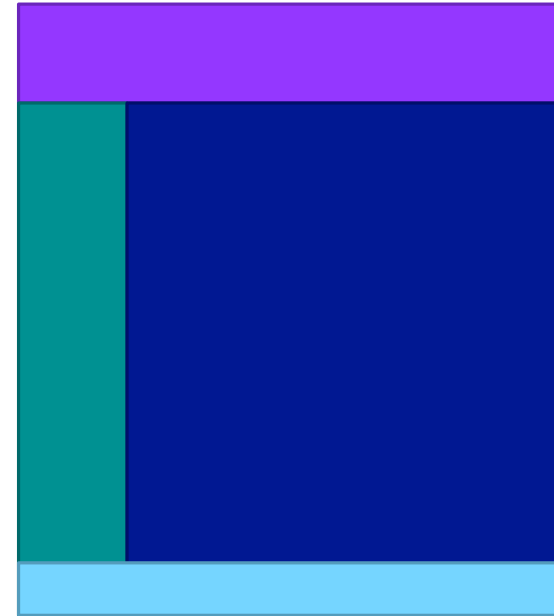


A Choice: Landmarks

A PAGE HAS NO LANDMARKS



EVERYTHING IN ITS PLACE



A Page Has No Landmarks



```
1 <div>Page Title</div>
2 <div><a href="/signup">Open an Account</a></div>
3 <div><a href="/services">Services Offered</a></div>
4 <div><input class="search" id="search" name="search" /></div>
5 <div>SPECIAL OFFER! EARN A $20 BONUS</div>
6 <div>
7   Plus, earn unlimited 1% cash back. Enjoy 0% intro APR for 5 months.
8 </div>
9 <div><small>&copy; 2019 Our Big Co</small></div>
```



```
1 <header>
2   <div>Page Title</div>
3 </header>
4 <nav class="navbar">
5   <div><a href="/signup">Open an Account</a></div>
6   <div><a href="/services">Services Offered</a></div>
7   <div>
8     <input class="search" id="search" name="search" />
9   </div>
10 </nav>
11 <main>
12   <div>SPECIAL OFFER! EARN A $20 BONUS</div>
13   <div>
14     Plus, earn unlimited 1% cash back. Enjoy 0% intro APR for 5 months.
15   </div>
16 </main>
17 <footer>
18   <div><small>&copy; 2019 Our Big Co</small></div>
19 </footer>
```

Missing Semantic HTML

```
1 <header>
2   <div>Page Title</div>
3 </header>
4 <nav class="navbar">
5   <div><a href="/signup">Open an Account</a></div>
6   <div><a href="/services">Services Offered</a></div>
7   <div>
8     <input class="search" id="search" name="search" />
9   </div>
10 </nav>
11 <main>
12   <div>SPECIAL OFFER! EARN A $20 BONUS</div>
13   <div>
14     Plus, earn unlimited 1% cash back. Enjoy 0% intro APR for 5 months.
15   </div>
16 </main>
17 <footer>
18   <div><small>&copy; 2019 Our Big Co</small></div>
19 </footer>
```

```
1 <header>
2   <h1>Page Title</h1>
3 </header>
4 <nav class="navbar">
5   <ul>
6     <li><a href="/signup">Open an Account</a></li>
7     <li><a href="/services">Services Offered</a></li>
8     <li>
9       <label for="search">Search</label>
10      <input class="search" id="search" name="search" />
11    </li>
12  </ul>
13 </nav>
14 <main>
15   <h2>SPECIAL OFFER! EARN A $20 BONUS</h2>
16   <p>
17     Plus, earn unlimited 1% cash back. Enjoy 0% intro APR for 5 months.
18   </p>
19 </main>
20 <footer>
21   <p><small>&copy; 2019 Our Big Co</small></p>
22 </footer>
```

Real Conversations

There is a non-negligible effect caused by new developers who were trained to use `<div>` elements instead of semantic HTML.

It's not old school, it's necessary. Any content that ends up on a browser page needs to have semantic HTML.

Cleverness



Custom Components

The Unlucky Choice

Custom components are awesome

They allow us to provide functionality that we wouldn't otherwise have in our apps

But a lot of times we are so focused on the clever part, or the functionality, that we forget important stuff.

Like keyboard navigation.



Let's Improve it!

1. If it can be done with a mouse, it must be able to be done with a keyboard.
2. Screen readers already have a ton of keyboard shortcuts- don't conflict!
3. Focus must return from whence it came!





Center of the Universe...?

“But It’s Important!”

It’s tempting to use ‘aria-live’

But if everything is important, then nothing is.

Don’t annoy your users!



Computer Says No

Is it counting down to catastrophic doom?

Don't use it then.







We always have a choice.

Thank you!



LinkedIn: <https://www.linkedin.com/in/melaniesumner/>

Twitter: [@melaniersumner](https://twitter.com/melaniersumner)

GitHub: <https://github.com/melsumner>

Noti.st: <https://noti.st/melsumner>