



MidCamp 2023

April 27, 2023



Andrew Olson
Frontend Software Engineer

Accessible JavaScript In Action



@andrewozone



andrewozone

Andrew Olson

Frontend Software Engineer



@andrewozone



andrewozone

Frontend Developer from the
Chicago Suburbs

Working with Drupal since 2008

Fun Fact About Me:

Musician + played in a band
at Lollapalooza



Member of A11yTalks

Join the A11yCat Club

<https://A11yTalks.com/pages/sponsorship>

<https://opencollective.com/a11ytalks>



A11yTalks

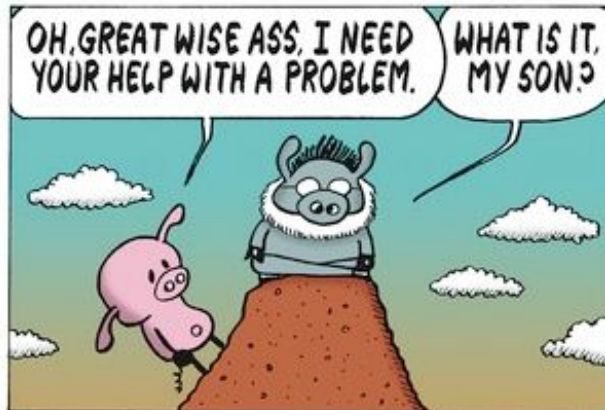
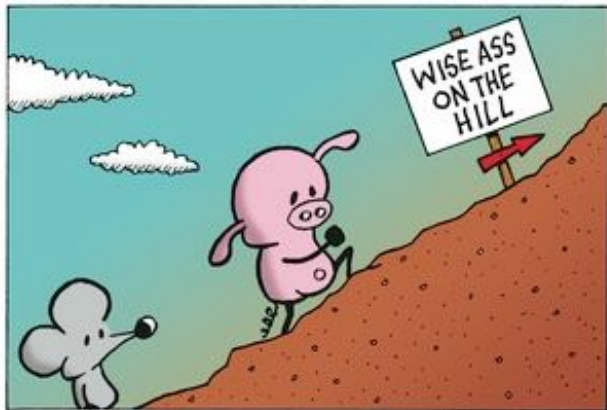


Agenda

- Modals / Pop-Ups / Pop-Ins
- Menus
- TypeAhead (also called Autocomplete)
- Wrap Up

PEARLS BEFORE SWINE

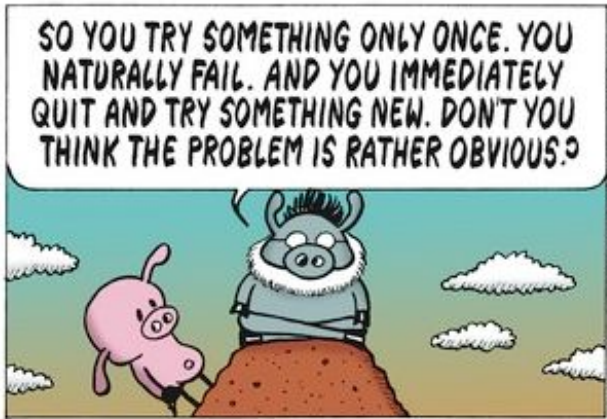
BY STEPHAN PASTIS



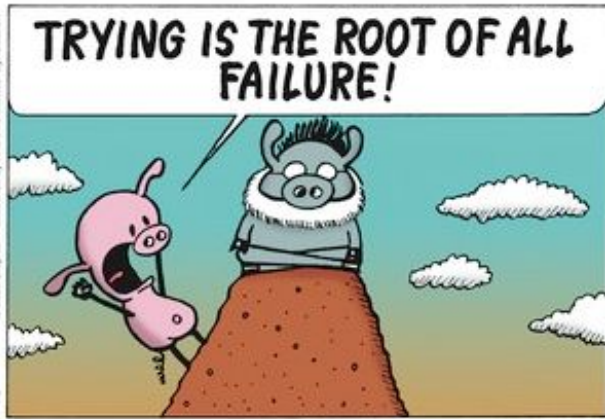
OH, GREAT WISE ASS, I NEED YOUR HELP WITH A PROBLEM. WHAT IS IT, MY SON?



I TRY SOMETHING NEW, AND I FAIL, AND I QUIT. SO I TRY SOMETHING ELSE NEW, AND I FAIL AND QUIT. AND TRY SOMETHING ELSE NEW AND FAIL AND FAIL AND FAIL.



SO YOU TRY SOMETHING ONLY ONCE. YOU NATURALLY FAIL. AND YOU IMMEDIATELY QUIT AND TRY SOMETHING NEW. DON'T YOU THINK THE PROBLEM IS RATHER OBVIOUS?



TRYING IS THE ROOT OF ALL FAILURE!



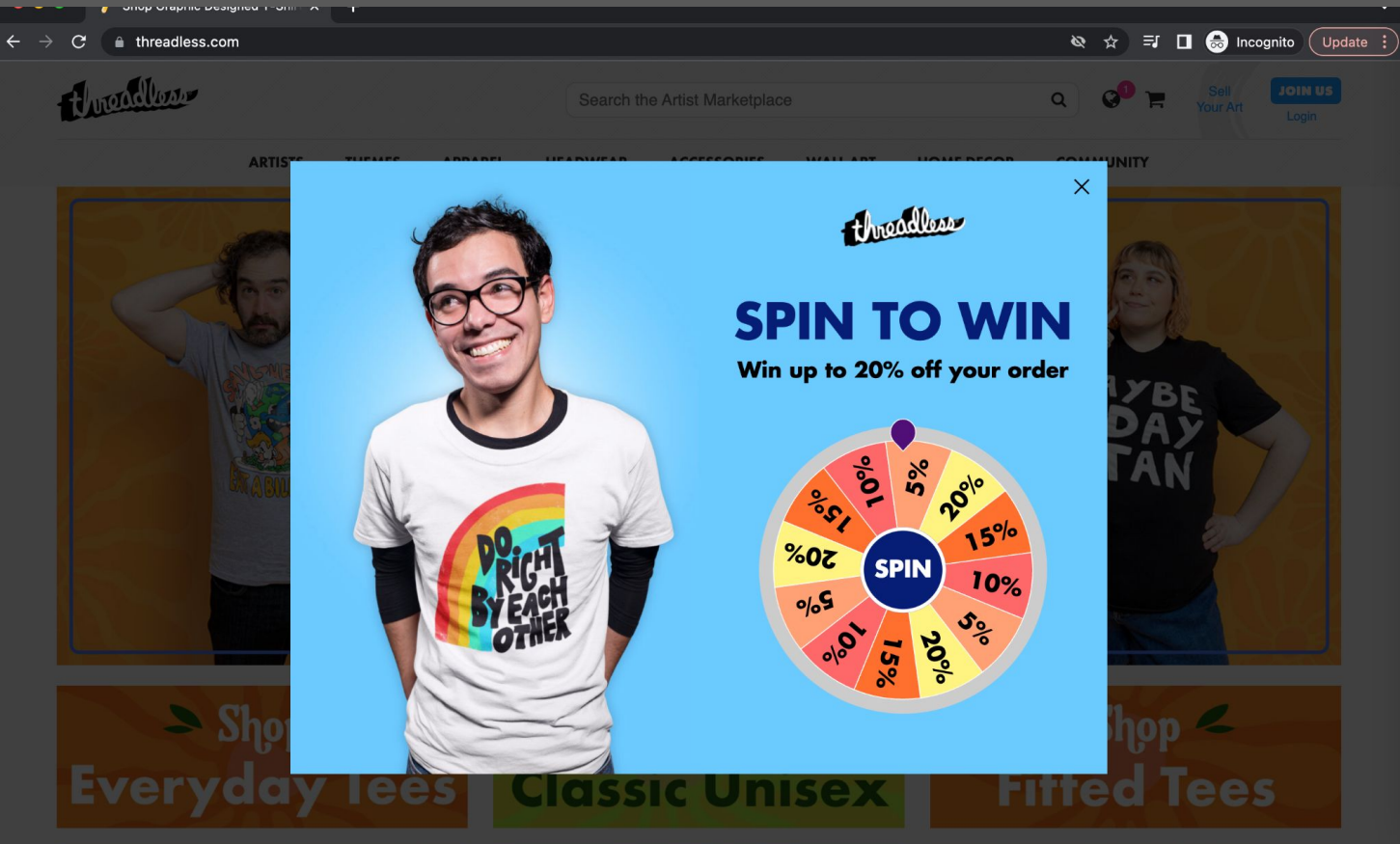
THEN HE CRIED AND JUMPED OFF THE MOUNTAIN.

© 2023 Stephan Pastis Dist. by Andrews McMeel Syndication
1/8

Modals / Pop-Ups / Pop-Ins

The screenshot shows the Threadless website interface. At the top, the Threadless logo is on the left, and a search bar with the text "Search the Artist Marketplace" is in the center. To the right of the search bar are icons for a shopping cart, a notification bell, and a "Sell Your Art" button. Further right are "JOIN US" and "Login" buttons. Below the navigation bar, a horizontal menu lists categories: ARTISTS, THEMES, APPAREL, HEADWEAR, ACCESSORIES, WALL ART, HOME DECOR, and COMMUNITY. The main content area features a large promotional banner with an orange background and a repeating floral pattern. The banner includes a "Spring Sale Extended" tag, a large "\$13 TEES" price tag, and a "SHOP NOW" button. Two models are shown: a man on the left wearing a grey t-shirt with a cartoon graphic and the text "GUNS N' ROSES BE A BILLIONAIRE", and a woman on the right wearing a black t-shirt with the text "MAYBE TODAY SATAN". Below the main banner are three smaller promotional buttons: "Shop Everyday Tees" (orange background), "Shop Classic Unisex" (green background), and "Shop Fitted Tees" (orange background).

Modals / Pop-Ups / Pop-Ins



~ 3 Second Delay
Pops into Page

Modals / Pop-Ups / Pop-Ins

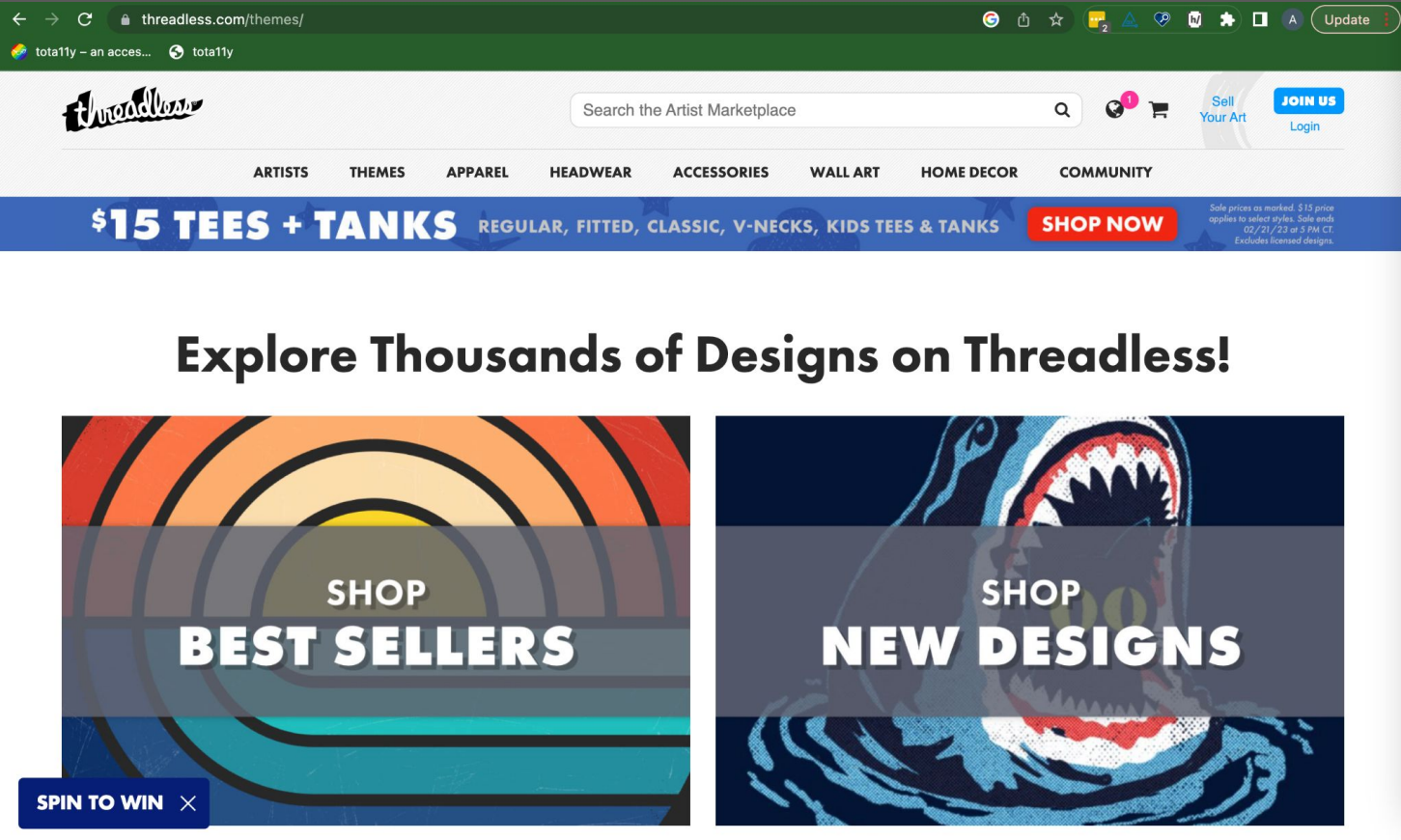


Click to dismiss.

Let's keep shopping!

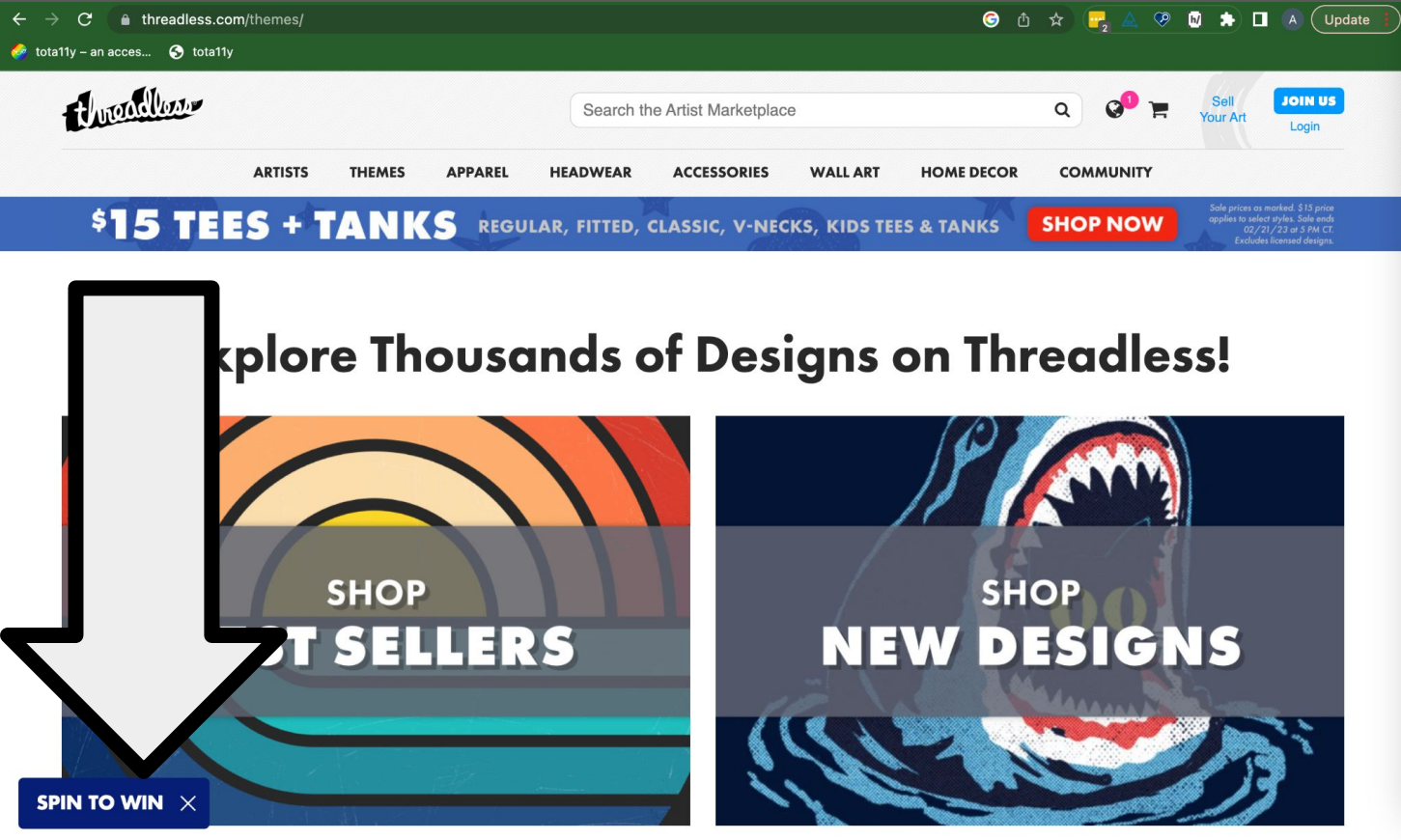
I don't even know if I like these t-shirts.

Modals / Pop-Ups / Pop-Ins



Wait a second, something seems familiar on this page.

Modals / Pop-Ups / Pop-Ins



Ah ha!

“Spin to Win!”

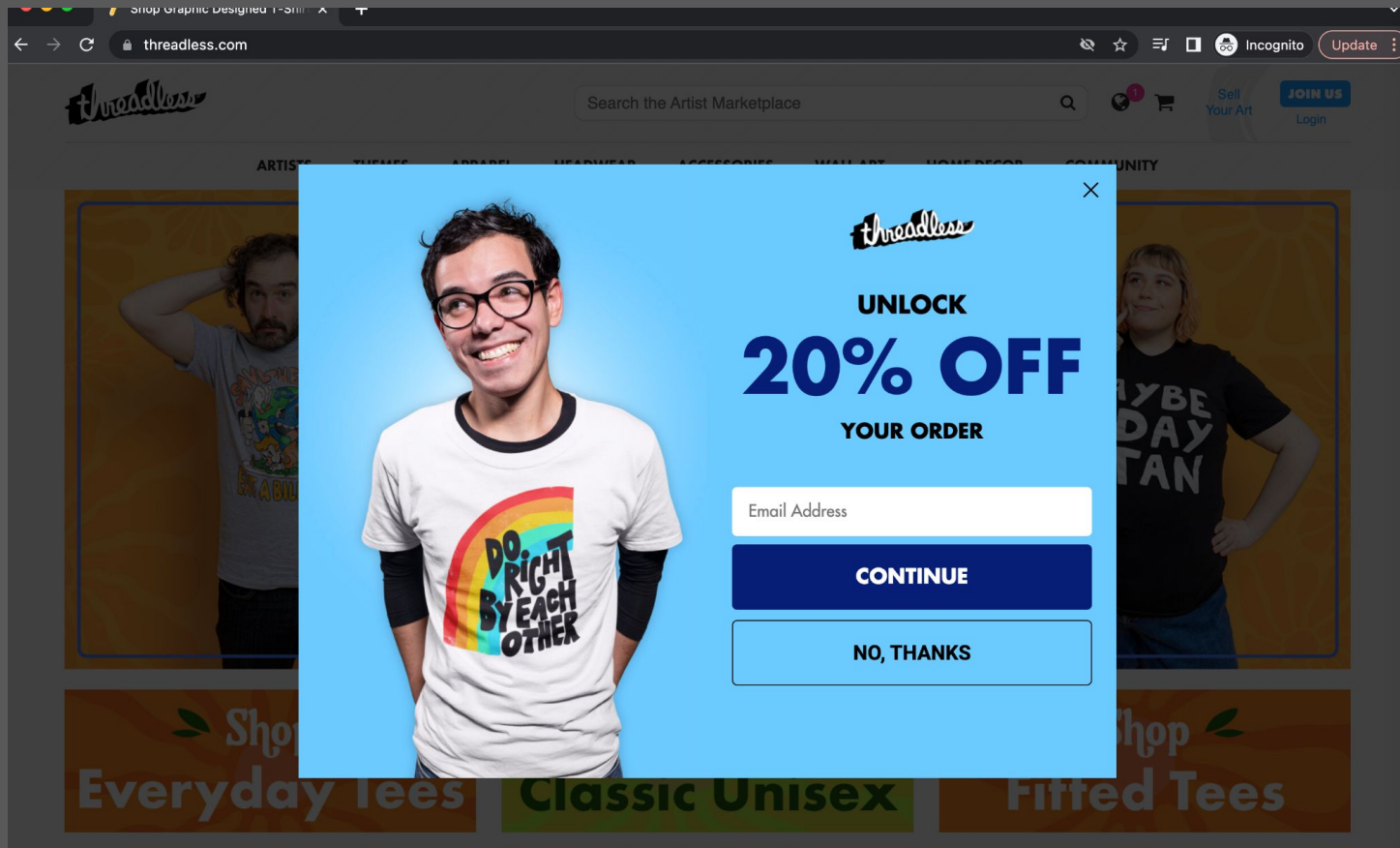
Modals / Pop-Ups / Pop-Ins

The screenshot shows a web browser displaying the Threadless website. A modal window is open, featuring a light blue background. On the left, a man with glasses and a white t-shirt with a rainbow graphic and the text "DO RIGHT BY EACH OTHER" is smiling. On the right, the text "SPIN TO WIN" is displayed in large blue letters, with "Win up to 20% off your order" below it. A wheel of fortune is positioned at the bottom right of the modal, with a purple pointer. The wheel is divided into 12 segments with the following discount percentages: 5%, 20%, 15%, 10%, 5%, 20%, 15%, 10%, 5%, 20%, 15%, and 10%. The word "SPIN" is written in the center of the wheel. The Threadless logo is at the top of the modal. The background of the website is dimmed, showing a search bar and navigation links.

OK, you got me!

I want a discount!

Modals / Pop-Ups / Pop-Ins



20%, not bad!

Oh, they need my e-mail. I guess that makes sense.

Modals / Pop-Ups / Pop-Ins

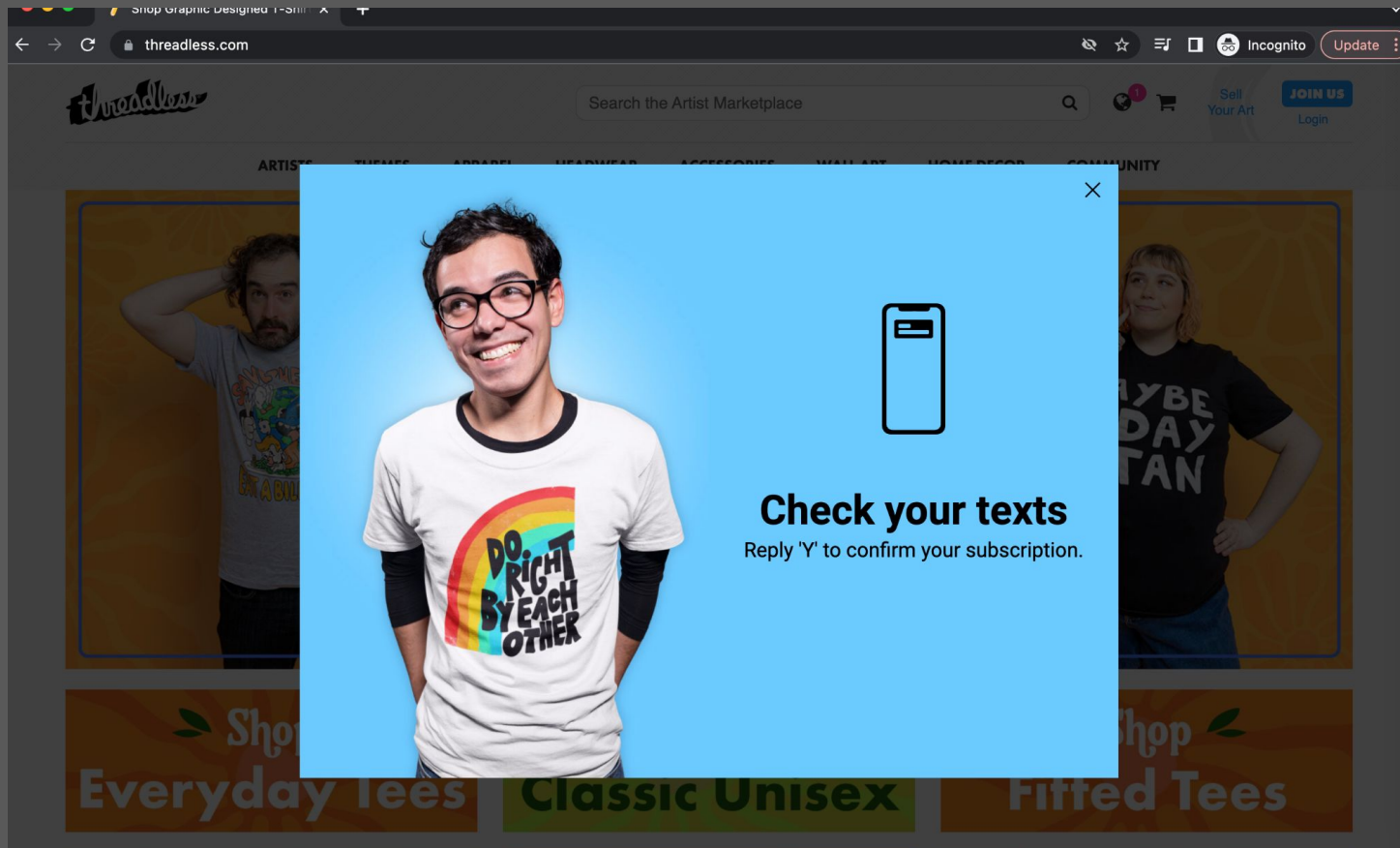
The screenshot shows a web browser window with the URL `threadless.com`. The page features the Threadless logo and a search bar. A modal is displayed in the center, featuring a smiling man wearing a white t-shirt with a rainbow and the text "DO RIGHT BY EACH OTHER". The modal contains the Threadless logo, the text "UNLOCK 20% OFF YOUR ORDER", a text input field for a "Mobile Number", and a blue button labeled "GET 20% OFF NOW" with the subtext "when you sign up for email and texts". A handwritten note "Complete your signup" with an arrow points to the button. At the bottom of the modal, a small asterisked note reads "*Discount code applies to full price on items." The background of the website is dimmed, showing other t-shirt designs.

Wait, I need to give you my phone number too?

Grrrrrrr ...

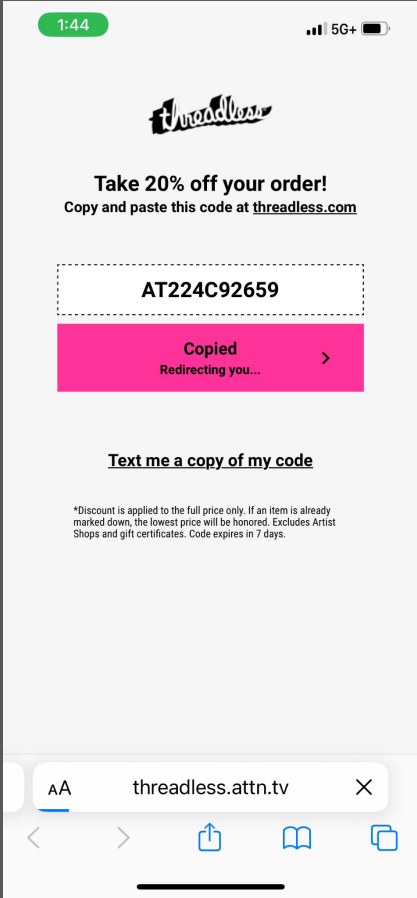
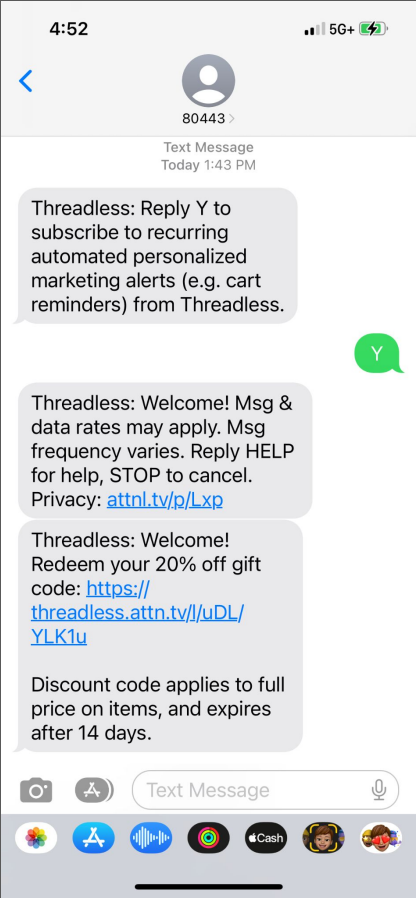
I really want that t-shirt though ...

Modals / Pop-Ups / Pop-Ins



Ok, sent.
My phone
beeped and
booped!

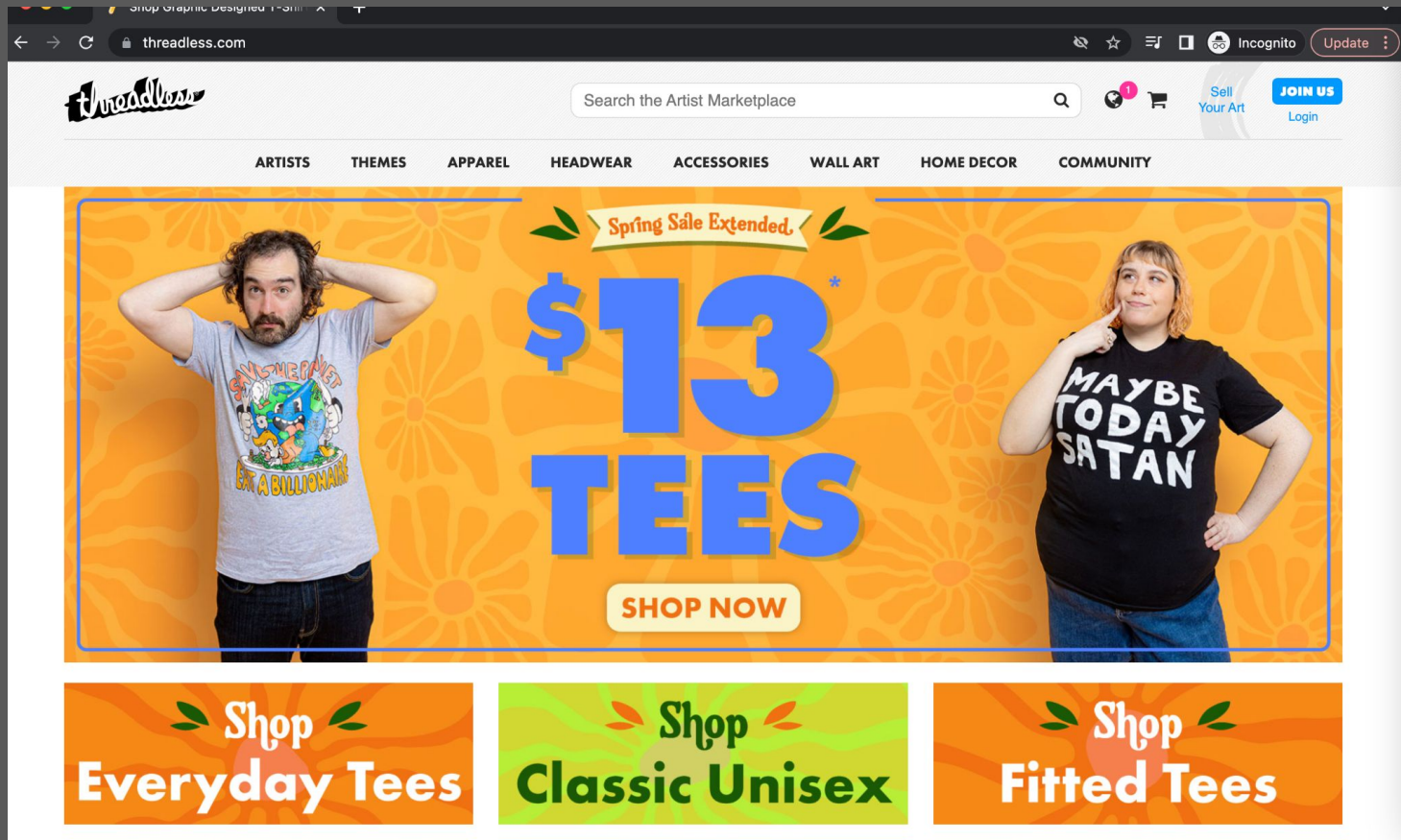
Modals / Pop-Ups / Pop-Ins



I picked up my phone, skimmed and clicked a link from this random contact.

I know, I live dangerously!

Modals / Pop-Ups / Pop-Ins



No more
"Spin To Win"

Modals / Pop-Ups / Pop-Ins



Rewind!

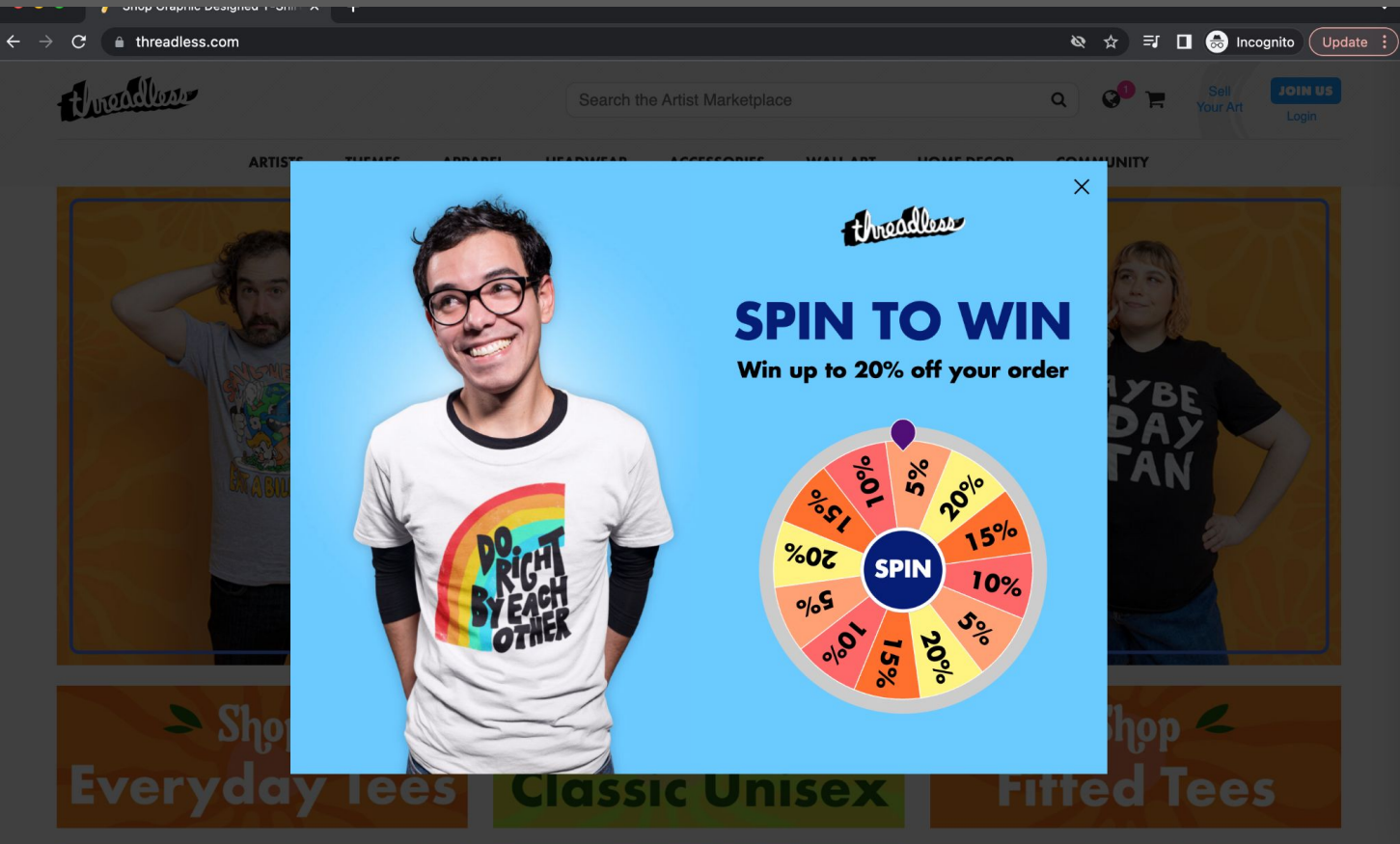
Let's go through that flow again, but as a user that only uses keyboard navigation.

Photo by Sai Harish on Unsplash

Modals / Pop-Ups / Pop-Ins

The screenshot shows the Threadless website interface. At the top, the Threadless logo is on the left, and a search bar with the text "Search the Artist Marketplace" is in the center. To the right of the search bar are icons for a shopping cart, a notification bell, and a "Sell Your Art" button. Further right are "JOIN US" and "Login" buttons. Below the search bar is a navigation menu with categories: ARTISTS, THEMES, APPAREL, HEADWEAR, ACCESSORIES, WALL ART, HOME DECOR, and COMMUNITY. The main content area features a large promotional banner with an orange background and a floral pattern. The banner includes a "Spring Sale Extended" banner at the top, a large "\$13 TEES" text in the center, and a "SHOP NOW" button at the bottom. Two models are shown: a man on the left wearing a grey t-shirt with a cartoon graphic and the text "GUNS N' ROSES BE A BILLIONAIRE", and a woman on the right wearing a black t-shirt with the text "MAYBE TODAY SATAN". Below the main banner are three smaller promotional buttons: "Shop Everyday Tees" (orange background), "Shop Classic Unisex" (green background), and "Shop Fitted Tees" (orange background).

Modals / Pop-Ups / Pop-Ins



~ 3 Second Delay
Pops into Page

Modals / Pop-Ups / Pop-Ins



~ Keyboard Trap
... in a good way :)

ESC key
to dismiss

Modals / Pop-Ups / Pop-Ins

Keyboard Trap and Previous Focus

Excellent code examples from Steve Woodson, Bounteous.

<https://a11y-solutions.stevenwoodson.com/solutions/focus/modals/>



Modals / Pop-Ups / Pop-Ins

Keyboard Trap and Previous Focus

Excellent code examples also available from Deque.

<https://dequeuniversity.com/library/aria/simple-alert-dialog>







Modals / Pop-Ups / Pop-Ins

Native HTML Dialog

Not quite ready.

<https://stevfaulkner.github.io/HTML5accessibility/>

<https://a11ysupport.io/>

ELEMENT	CRITERIA					
⊖ dialog	Accessibly supported	✓	✓	✓	—	○
	Feature implemented	✓	✓	✗	✗	✗
	Mapped	✓	—	—	—	✗ 
	Keyboard	✓	—	—	—	—

Modals / Pop-Ups / Pop-Ins



Rewind!

Let's go through that flow again, but as a user that uses a screen reader VoiceOver on a Mac.

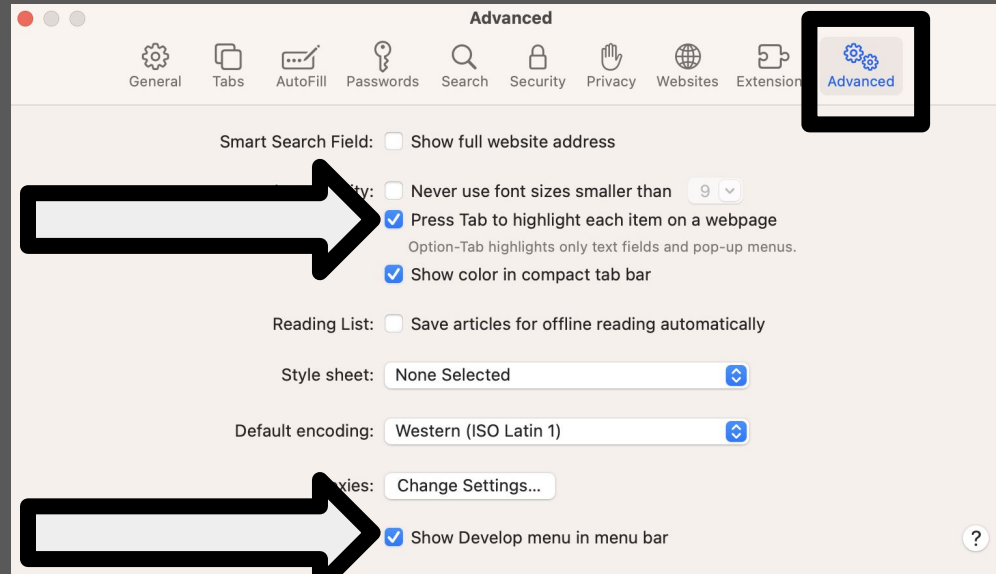
Photo by Sai Harish on Unsplash

Modals / Pop-Ups / Pop-Ins

Safari and VoiceOver ProTips

VoiceOver shortcuts reference

<https://dequeuniversity.com/screenreaders/voiceover-keyboard-shortcuts>



Modals / Pop-Ups / Pop-Ins

The screenshot shows a browser window at threadless.com with a modal overlay. The modal contains a man in a white t-shirt with a rainbow and the text "DO RIGHT BY EACH OTHER". To his right is a "SPIN TO WIN" wheel with segments for 5%, 10%, 15%, and 20% discounts. The text "SPIN TO WIN" and "Win up to 20% off your order" is displayed above the wheel. The browser's developer tools are open, showing the HTML structure of the modal. An arrow points from the modal to the following code snippet:

```
<div role="dialog" tabindex="-1" id="dialogContainer" aria-modal="true" aria-label="Sign Up via Text for Offrs - Threadless" style="height: 100%;">
```

Using aria-modal and aria-label

Modals / Pop-Ups / Pop-Ins

Modal Dialog Example

Excellent code examples from ARIA Authoring Practices Guide (APG)

<https://www.w3.org/WAI/ARIA/apg/patterns/dialog-modal/examples/dialog/>



Modals / Pop-Ups / Pop-Ins



Work together with:

- Marketing
- Analytics
- Real Users (I know, right?)

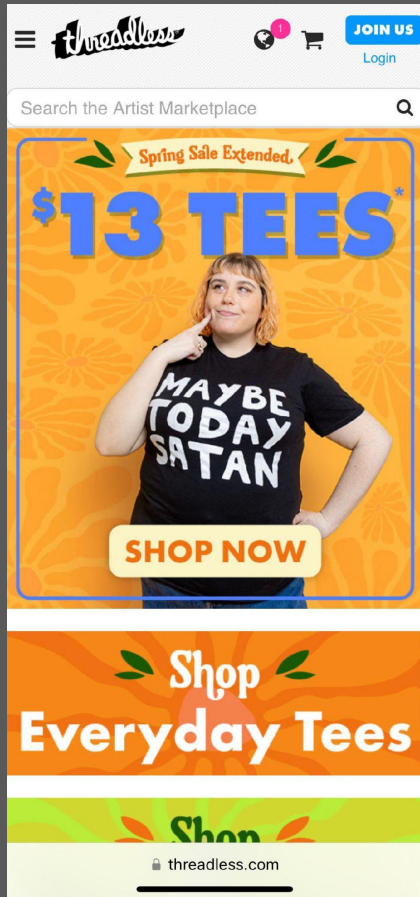
Modified Photo by Ian Schneider
on Unsplash

Modals / Pop-Ups / Pop-Ins

What are the choices in the Drupal Admin?

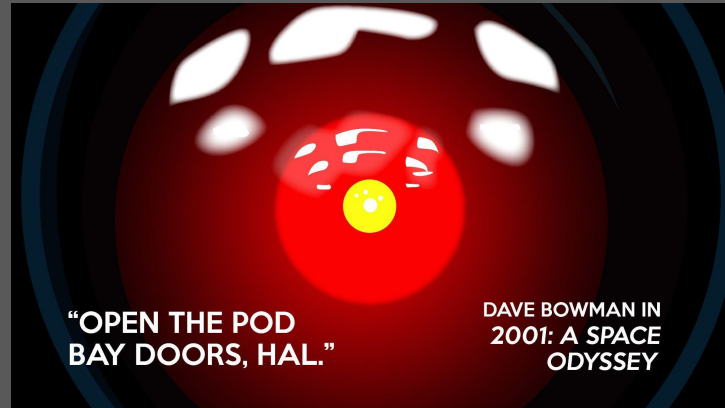
- Select Time to Pop. *5 seconds default, but can be customized.*
- Cookies vs. Browser Local Storage.
- Salesforce Forms vs Coupon Generators (or both!).
- Display by URL path. Wildcards allowed.
- Special URLs from Newsletters or Email Marketing. *Regex FTW!*
- Select locale.
- Hide on mobile viewports.

Modals / Pop-Ups / Pop-Ins



Appears that “Spin To Win” is for desktop only.

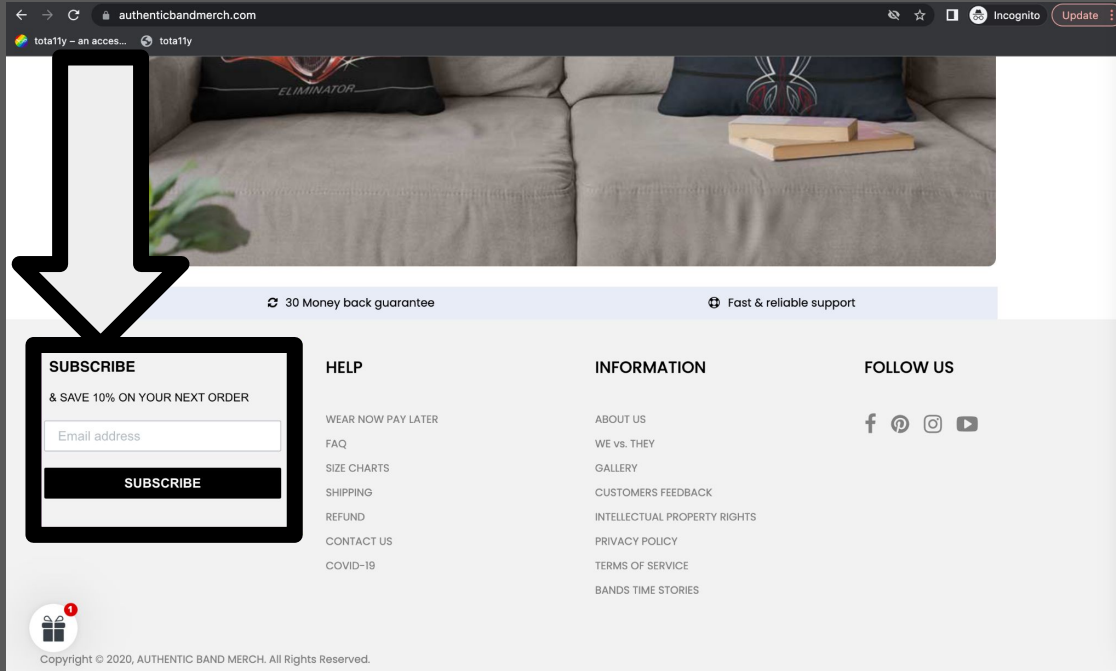
Or, someone has profiled, personalized, and tracked me so well that they knew I already have a discount code and I am visiting separately on my phone. And I love cats. And I love the movie *2001: A Space Odyssey* ... this is fine, right?



<https://twitter.com/formattedscreen/status/689658075817476096>

Modals / Pop-Ups / Pop-Ins

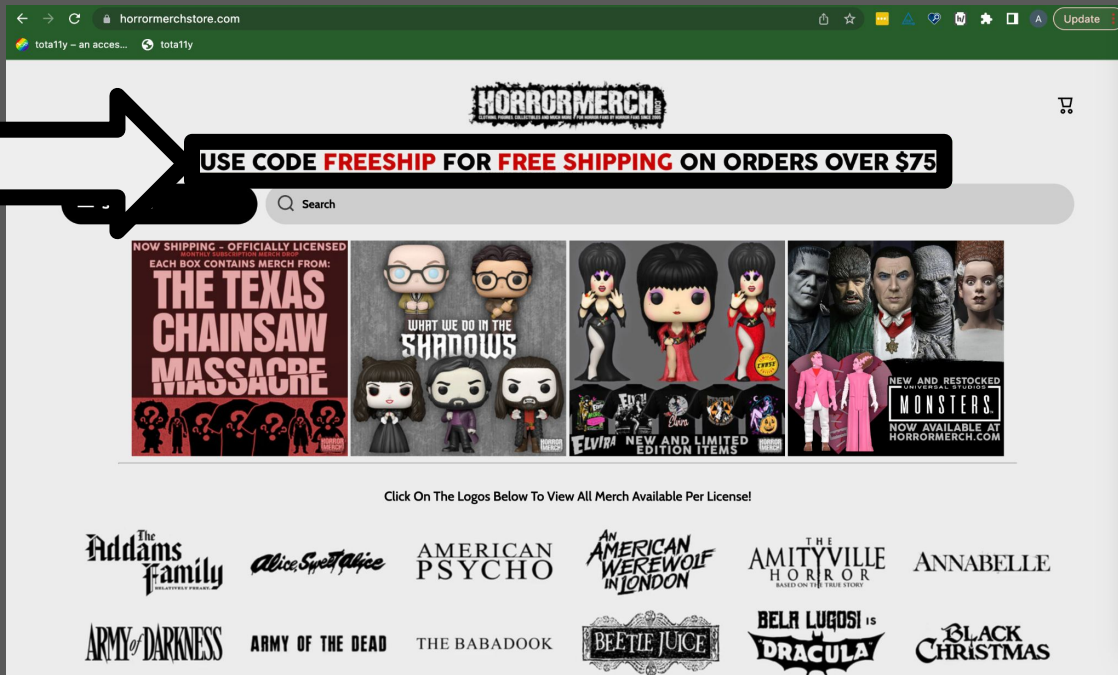
Alternatives



Newsletter signup in the footer with incentive to sign up.

Modals / Pop-Ups / Pop-Ins

Alternatives



Consistent graphic at the top of the home page.

... but please use alt text for the image!!

Modals / Pop-Ups / Pop-Ins

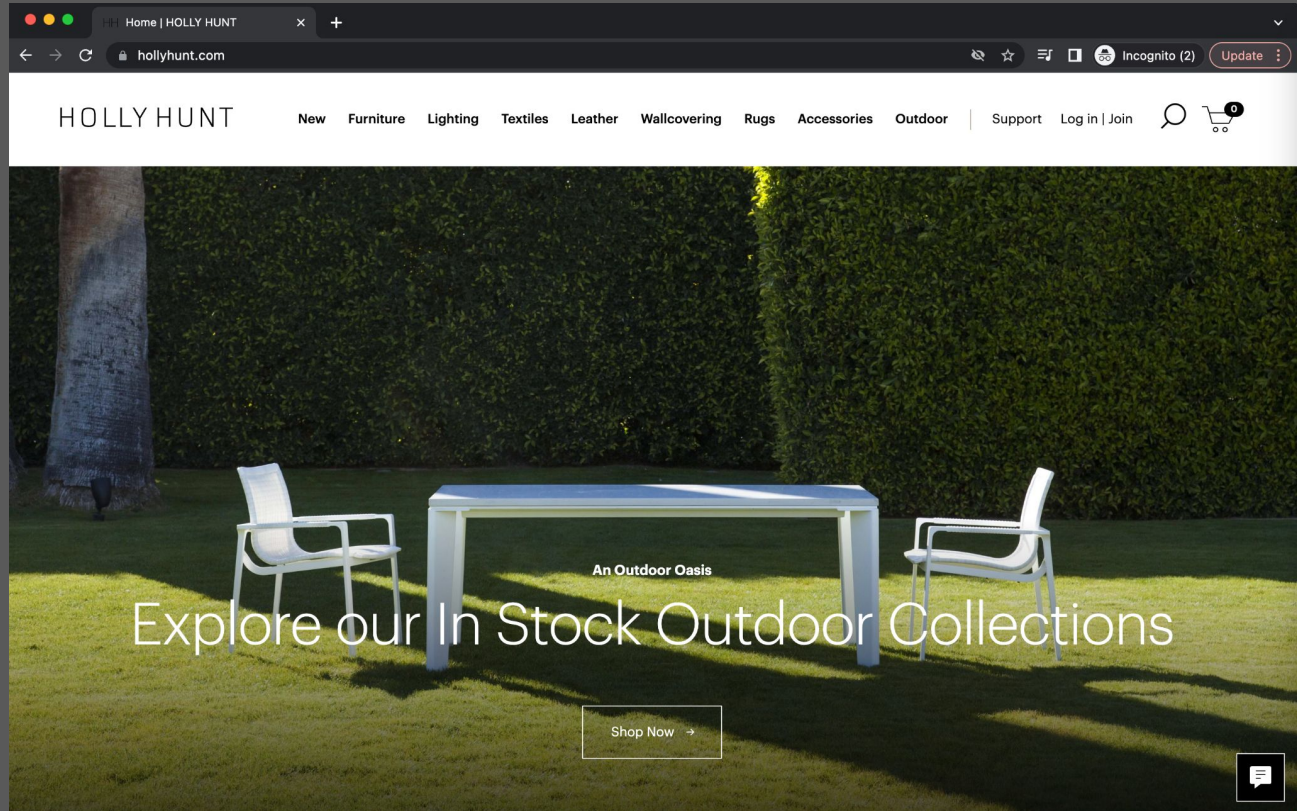
Alternatives

The screenshot shows the Wilson.com website with a grid of basketball products. A large black arrow points from the left towards a modal advertisement on the right. The modal features an image of two people sitting on a bench with a basketball, and text that reads "DISCOVER A NEW WAY TO INTERACT WITH YOUR BALL" and "DOWNLOAD WILSON LIVE". The website interface includes filters for SIZE, PRICE, and COLOR, and product details for various Wilson basketball models like NBA Authentic Outdoor, NCAA Evo NXT, and WNBA Official Game.

Advertise in context
of the shopping
experience.

Menus

Main navigation



Menus

Main navigation

The screenshot shows the main navigation and promotional banners of the HOLLY HUNT website. The browser address bar shows the URL hollyhunt.com. The navigation menu includes: New, Furniture, Lighting, Textiles, Leather, Wallcovering, Rugs, Accessories, Outdoor, Support, Log in | Join, and a shopping cart icon with 0 items. Below the navigation, there are two columns of links: Shop by Category (Furniture, Lighting, Textiles, Leather, Wallcovering, Rugs, Accessories, Outdoor) and Shop by Collection (In Stock - Buy Online, Gift Guide, Designer Favorites, Dining Essentials, The Edit). Two promotional banners are displayed: 'Discover the latest In Stock Designs' with a 'Shop Now' button, and 'Explore the Dawn to Dusk Collection' with a 'Shop Now' button. At the bottom, a large banner for 'An Outdoor Oasis' features the text 'Explore our In Stock Outdoor Collections' and a 'Shop Now' button.

HOLLY HUNT

New Furniture Lighting Textiles Leather Wallcovering Rugs Accessories Outdoor | Support Log in | Join

Shop by Category
Furniture
Lighting
Textiles
Leather
Wallcovering
Rugs
Accessories
Outdoor

Shop by Collection
In Stock - Buy Online
Gift Guide
Designer Favorites
Dining Essentials
The Edit

Discover the latest In Stock Designs
Shop Now →

Explore the Dawn to Dusk Collection
Shop Now →

An Outdoor Oasis
Explore our In Stock Outdoor Collections
Shop Now →

Menus

Co-Maintainer for TB Mega Menu on Drupal

https://www.drupal.org/project/tb_megamenu

Keyboard Navigation Support

<https://www.drupal.org/docs/contributed-modules/the-better-mega-menu/accessibility-features/keyboard-navigation>

Menus

Live Demo of TB Mega Menu!!

<https://www.hollyhunt.com/>



<https://twitter.com/andrewozone/status/1472420769888186368>

<https://nypost.com/2021/12/15/jorts-the-ginger-cat-sparks-debate-about-perpetuating-ethnic-stereotypes/>

Menus

Read About Olivero's Menu (it's amazing!!)

The Accessibility And Usability Journey Of Drupal's Primary Navigation

By Mike Herchel

<https://www.smashingmagazine.com/2022/09/accessibility-usability-drupal-primary-navigation/>

Menus

Watch the DrupalCon 2022 Session

Building Olivero's hyper accessible and beautiful navigation from the ground up
DrupalCon Portland

<https://youtu.be/dn-JN2bcw1s>

Menus

Navigation Menubar Example

<https://www.w3.org/WAI/ARIA/apg/patterns/menubar/examples/menubar-navigation/>

Disclosure Navigation Menu Example

<https://www.w3.org/WAI/ARIA/apg/patterns/disclosure/examples/disclosure-navigation-hybrid/>

Reference: <https://adrianroselli.com/2019/06/link-disclosure-widget-navigation.html>

TypeAhead

Country

TypeAhead

Country

uni|

Reunion

Tunisia

United Arab Emirates

United Kingdom

United States

TypeAhead

Country

united |

United Arab Emirates

United Kingdom

United States

TypeAhead

Country

United States|

TypeAhead

Accessible Autocomplete

Supported by the [GOV.UK Design System](#) team

[Demo](#)

[Code](#)

TypeAhead

Drupal Announce

Creates an `aria-live` element on the page. Read out by screen readers when content changes. Two priority values: Polite (default) or Assertive.

```
Drupal.announce('This text will be read to AT users.');
```

```
Drupal.announce('Will be read when other announcements end.', 'polite');
```

```
Drupal.announce('Will interrupt other announcements.', 'assertive');
```

<https://www.drupal.org/docs/drupal-apis/javascript-api/accessibility-tools-for-javascript-in-drupal-8#aria-live>

TypeAhead

Drupal Announce

The 10 Most Useful Libraries in Drupal 10 Core

Presented by Andy Blum, Lullabot

[Demo](#)

[Slides](#)

[Full Presentation at Florida DrupalCamp](#) (fast-forward to minute 11:11)

TypeAhead

Drupal Announce

Article by Jules Khong

<https://thinkshout.com/blog/2020/11/screen-readers/>

TypeAhead

aria-live

Excellent code examples from Steve Woodson, Bounteous.

<https://a11y-solutions.stevenwoodson.com/solutions/aria/live/>



TypeAhead

Concerns

Number of Results Returned

Too Verbose vs. Not Enough Information

Context for Results

Cognitive Load



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Andrew Olson
Frontend Software Engineer

Thank You



@andrewozone



andrewozone

TypeAhead

Drupal Announce

JavaScript and Accessibility: Don't Blame the Language

Presented by Everett Zufelt

<https://events.drupal.org/nashville2018/sessions/javascript-and-accessibility-dont-blame-language>

TypeAhead / Autocomplete

Oh dear, we ran
out of time.

Check out these resources in
the meantime ...



Photo by Xu Haiwei on Unsplash

Andrew Olson

Frontend Software Engineer

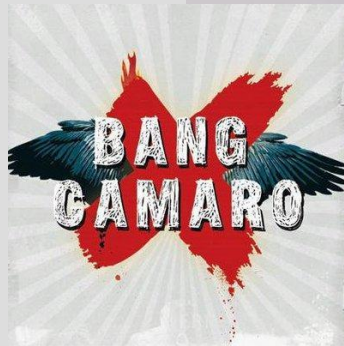


Frontend Developer from the
Chicago Suburbs

Working with Drupal since 2008

Fun Fact About Me:

Musician + played in a band
at Lollapalooza



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