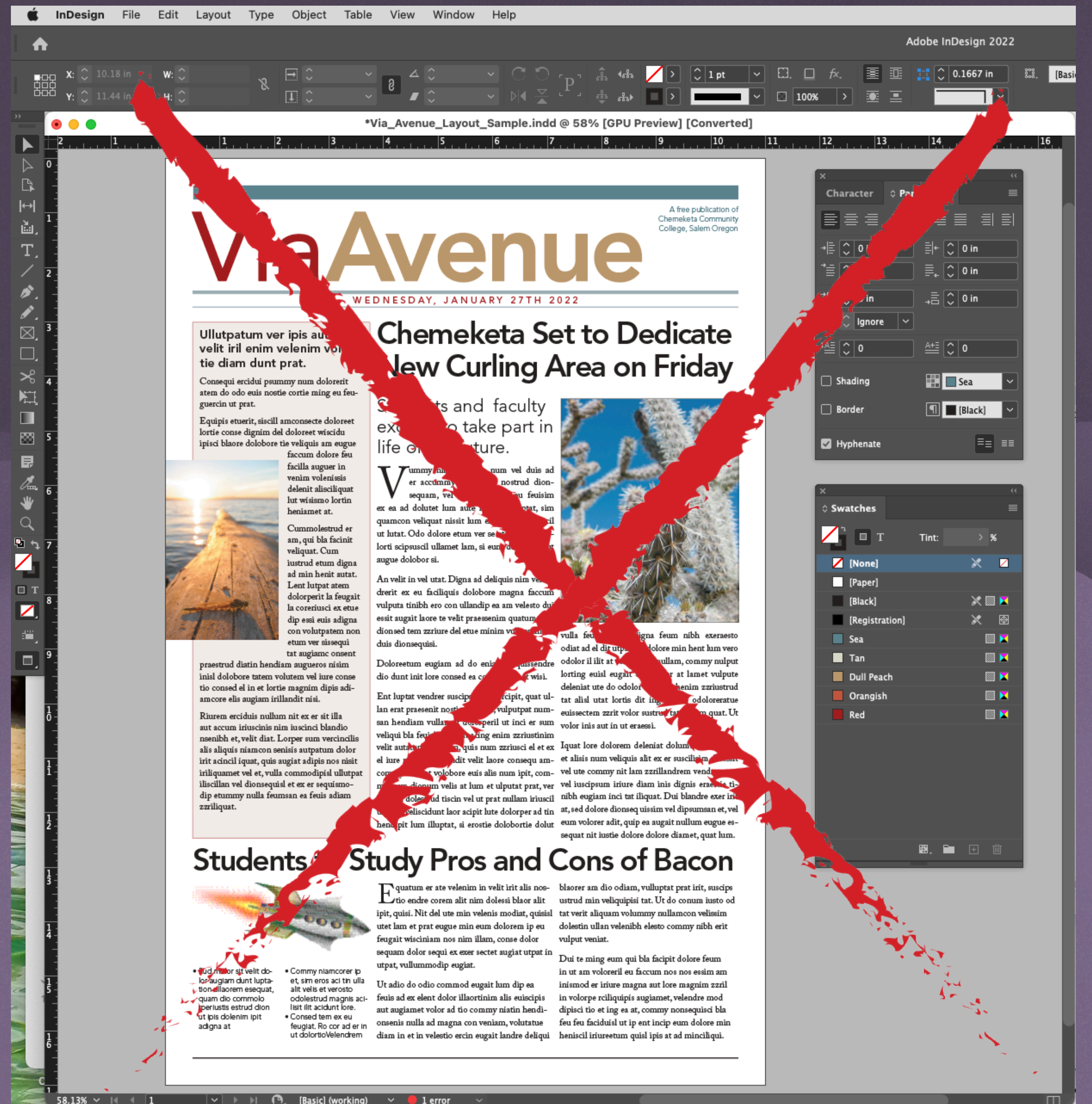


The Medium of the Web

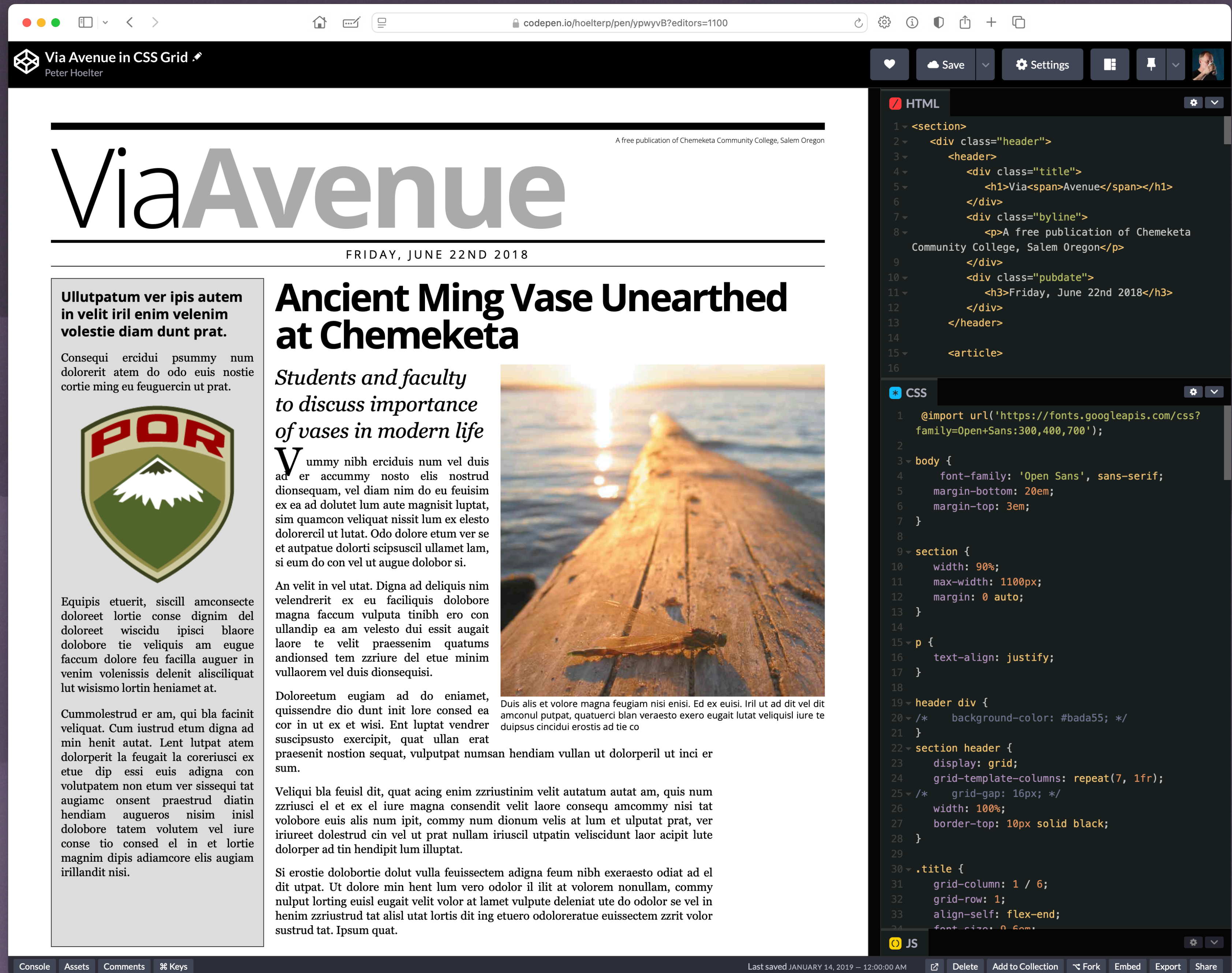


PRESENTATION MEDIUM: The Digital Display

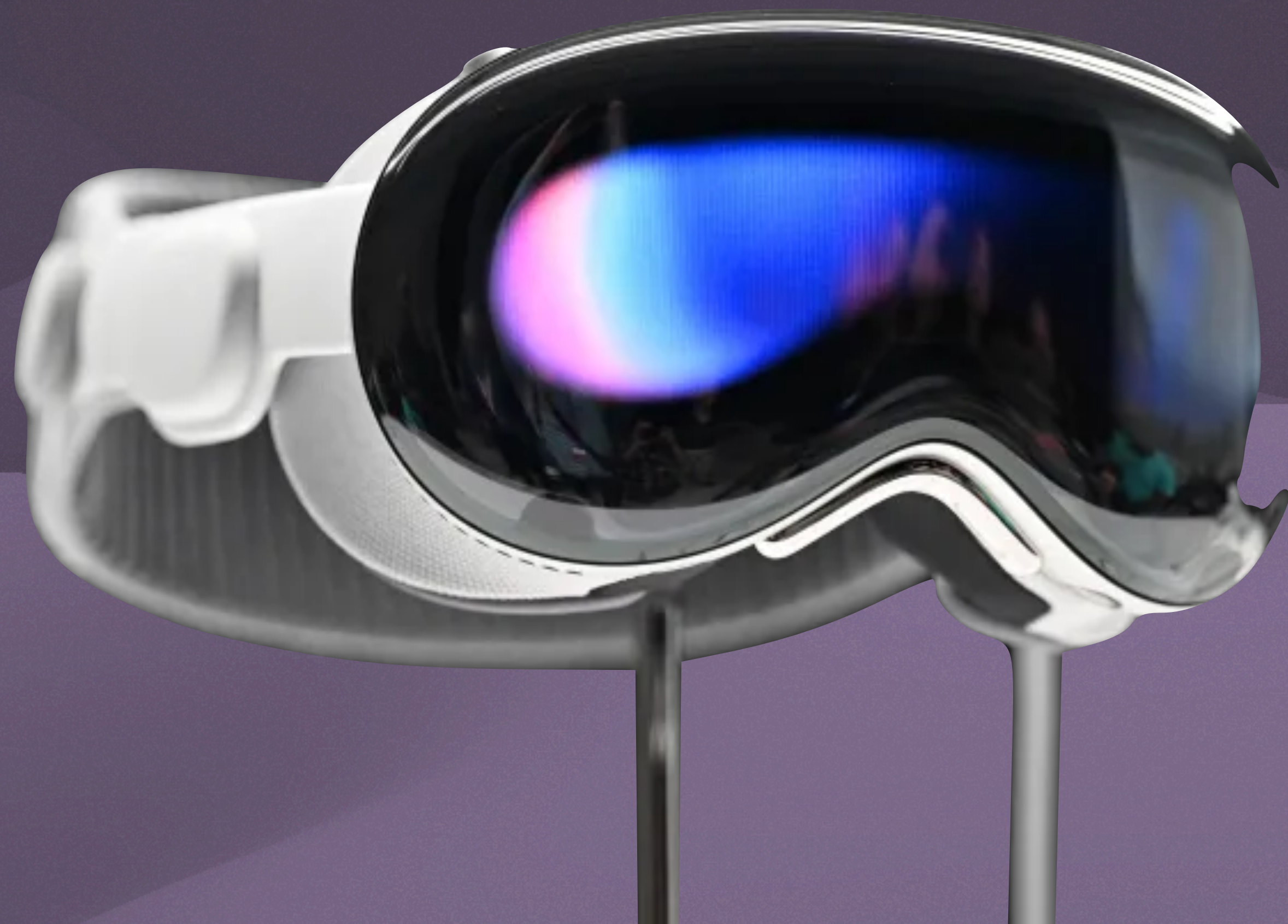
It's not print.

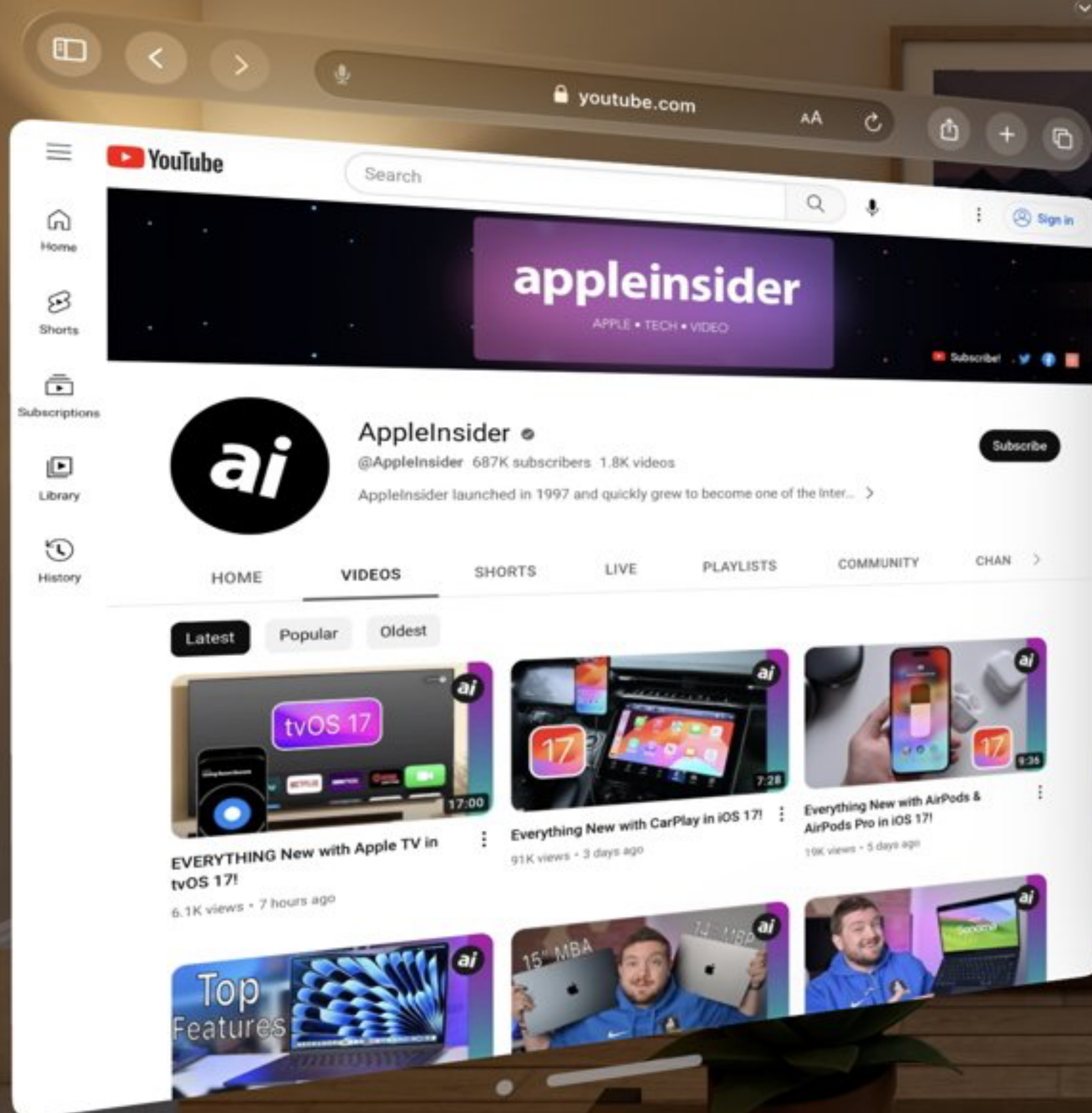


...and we
don't
want it to
be print.









Key Differences from Print

- **Base unit is a pixel***
 - OK, technically-speaking a “subpixel” is the base unit (see colors to the right), but we can only work with whole pixels.
 - And even then, in CSS the concept of a pixel is abstracted, so we really can’t work directly with pixels anymore. Sigh.



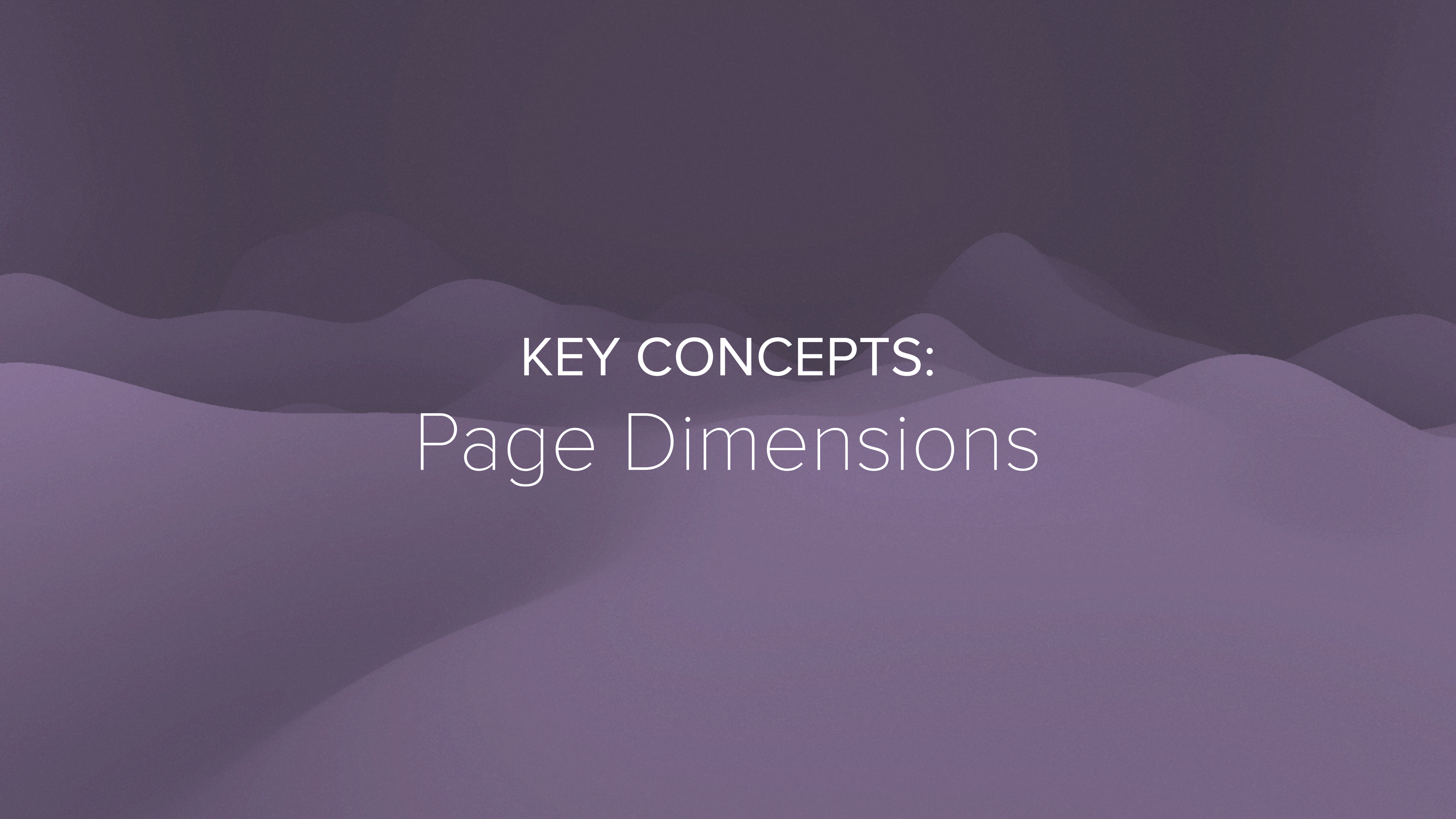
Key Differences from Print

- **Resolution is lower than print, but it's catching up**
 - Default assumption of pixels-per-inch is 96ppi.
 - Again, mobile devices and HiDPI displays are changing this (iPhone 17 Pro's screen resolution is 460ppi)



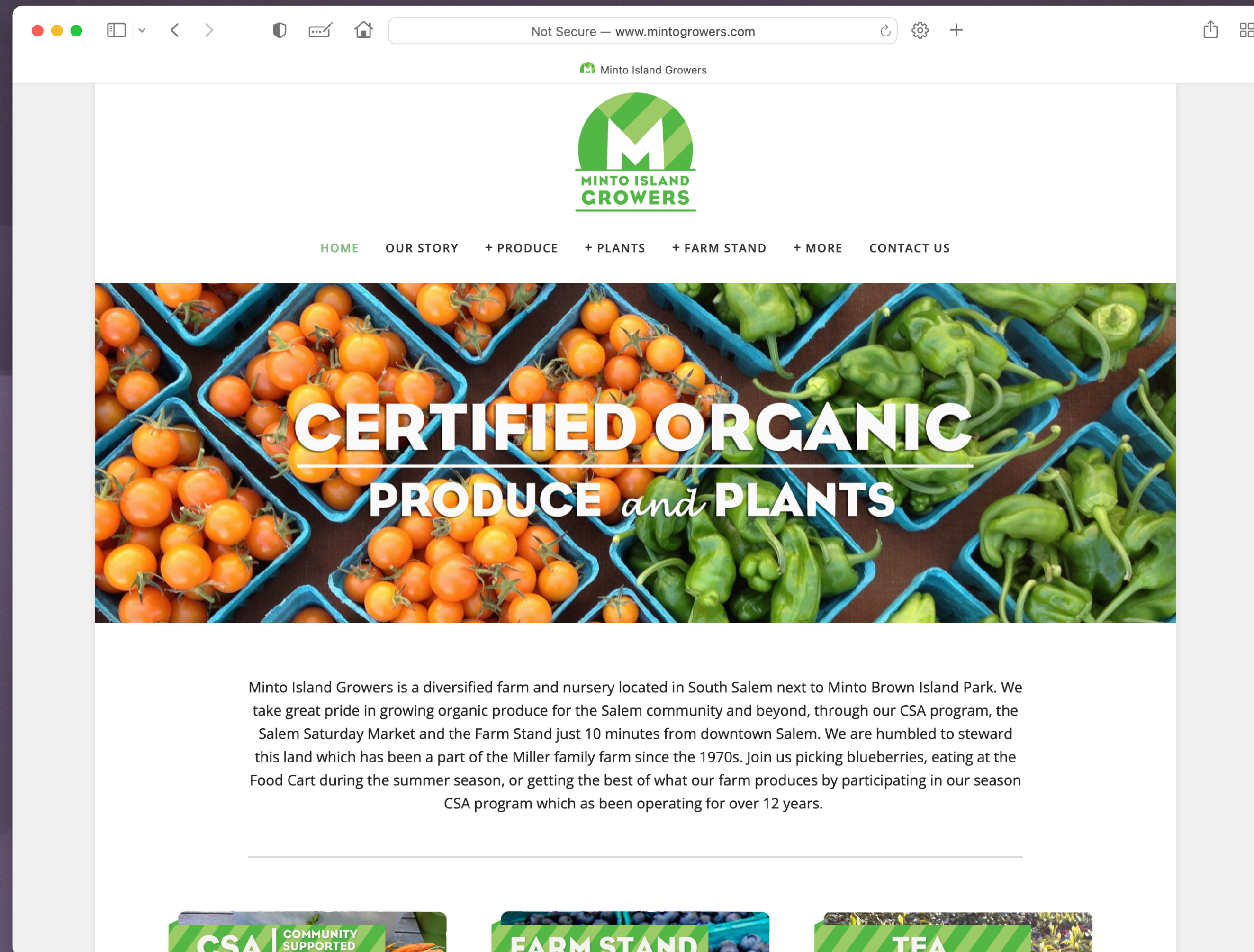
Key Differences from Print

- **Pages are rendered on the fly, and presentation varies depending on a number of factors:**
 - Device type (desktop, tablet, smartphone, TV, gaming console, etc.)
 - Operating system (Mac, Windows, Linux)
 - Web browser maker (Safari, Chrome, Firefox, Microsoft Edge)
 - Web browser version (6.0, 7.0, 8.0, etc.)
 - User preferences (adjustments to the default typeface, size, colors, etc.)

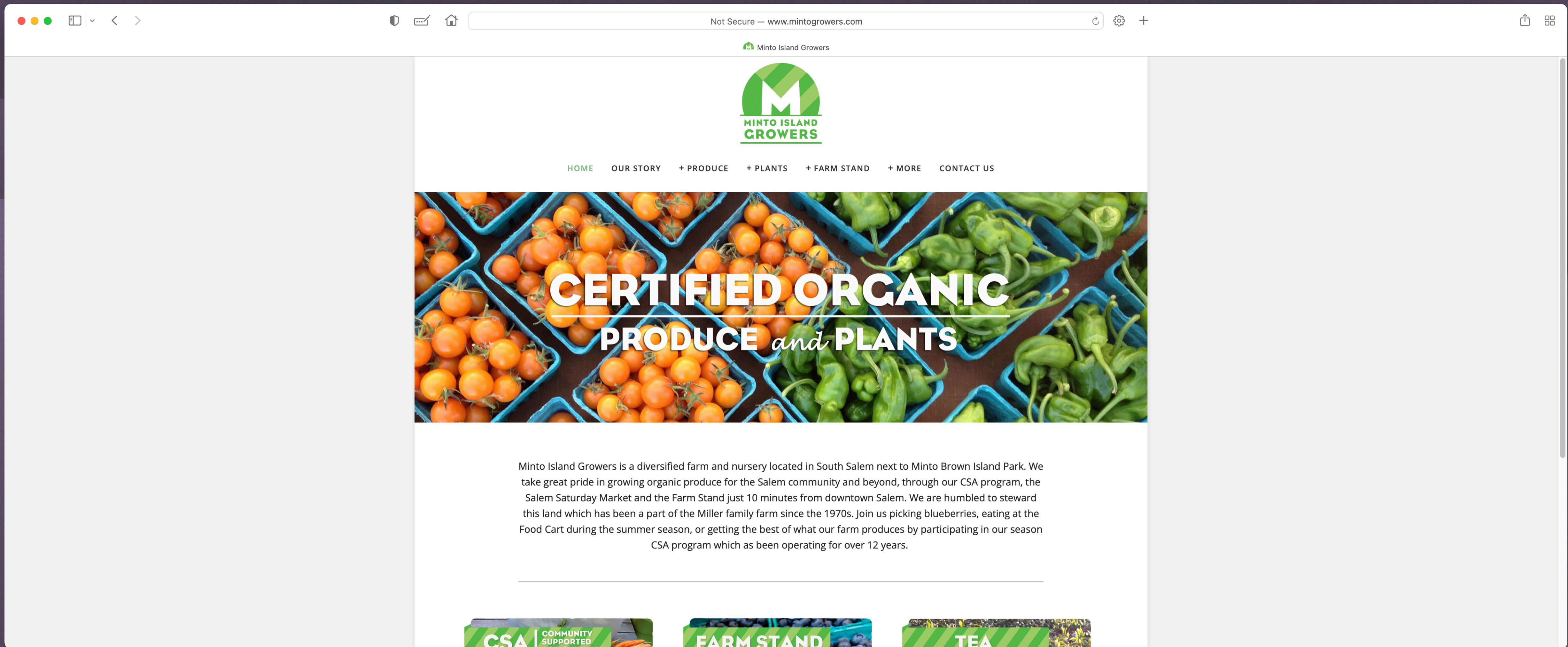


KEY CONCEPTS: Page Dimensions

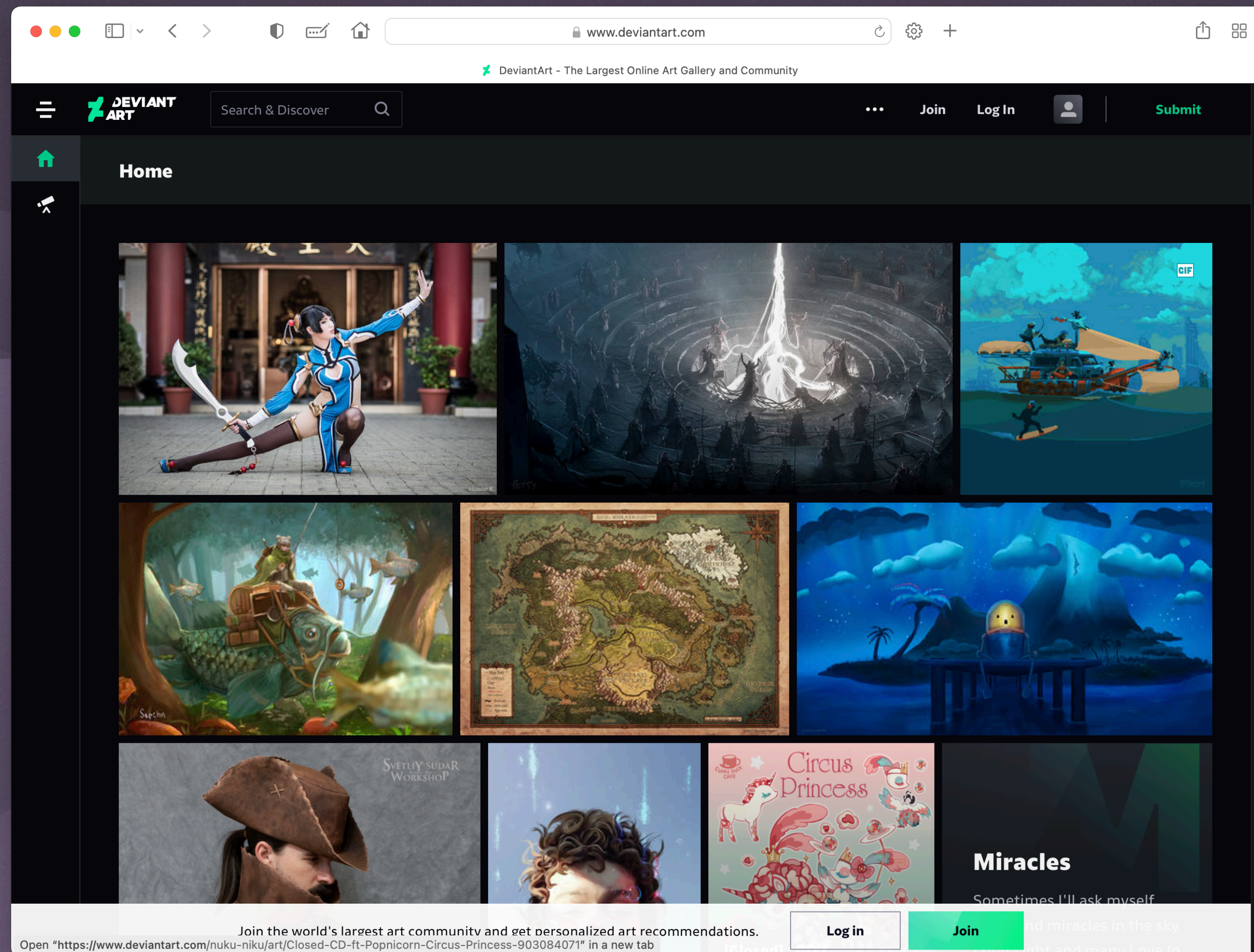
Page Width: *Fixed*



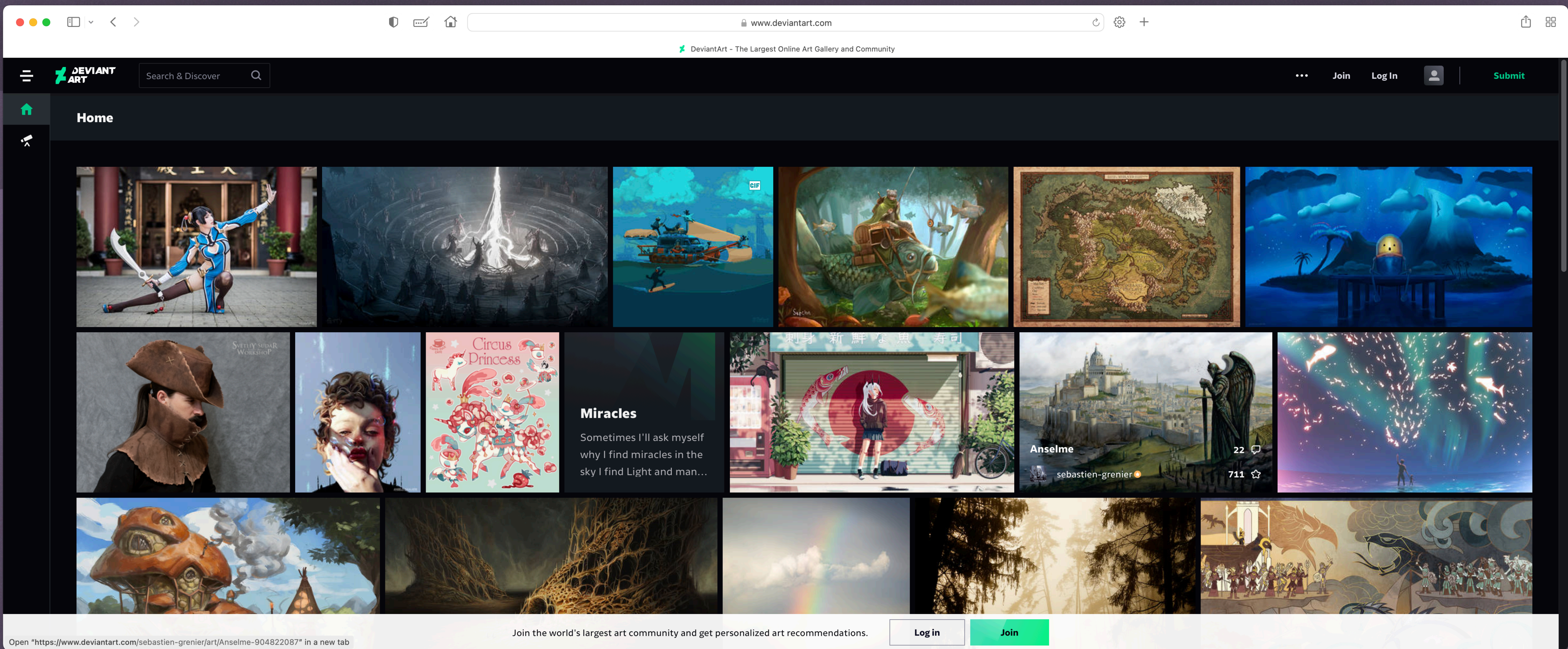
Page Width: *Fixed*



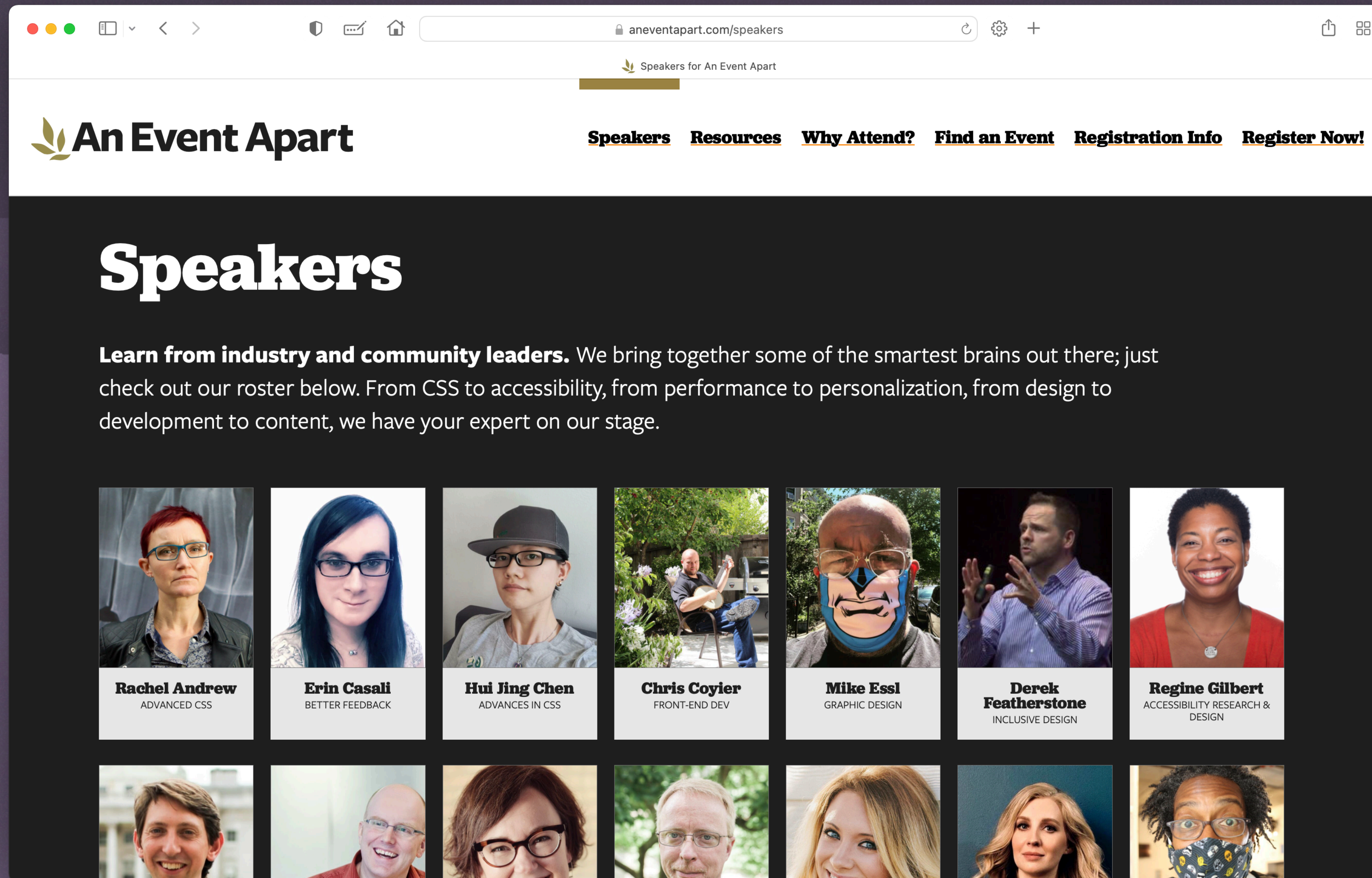
Page Width: *Liquid*



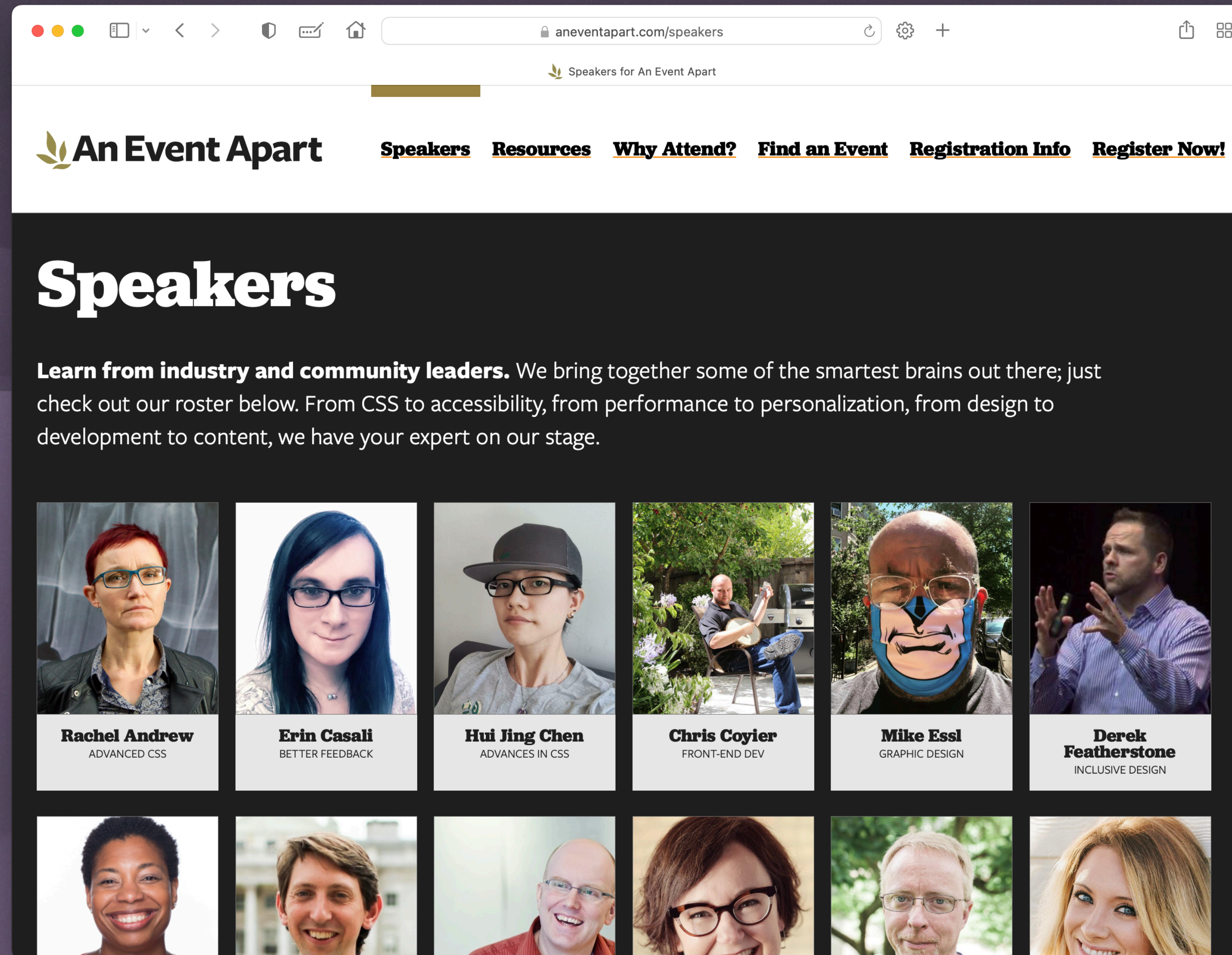
Page Width: *Liquid*



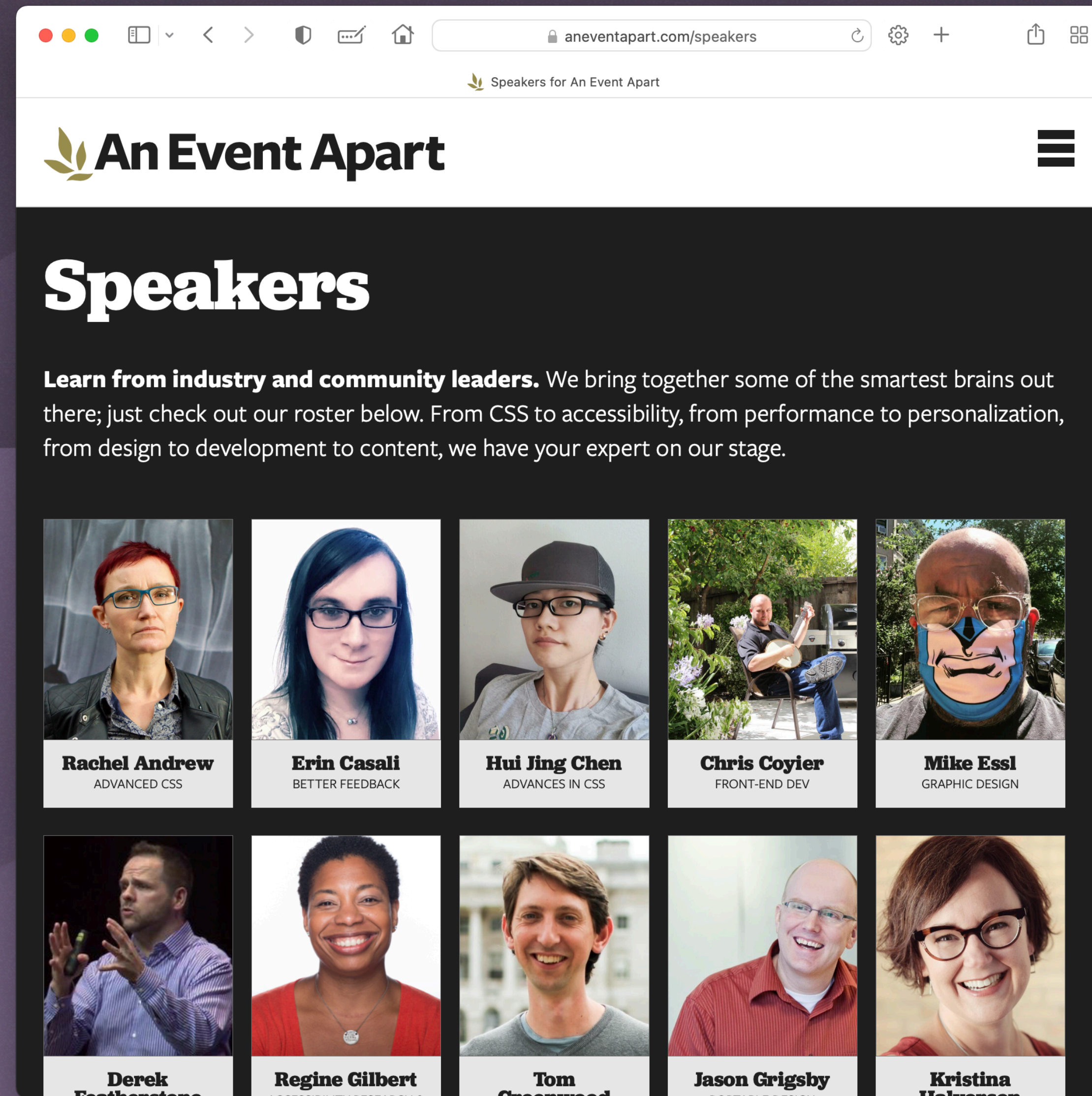
Page Width: *Responsive*



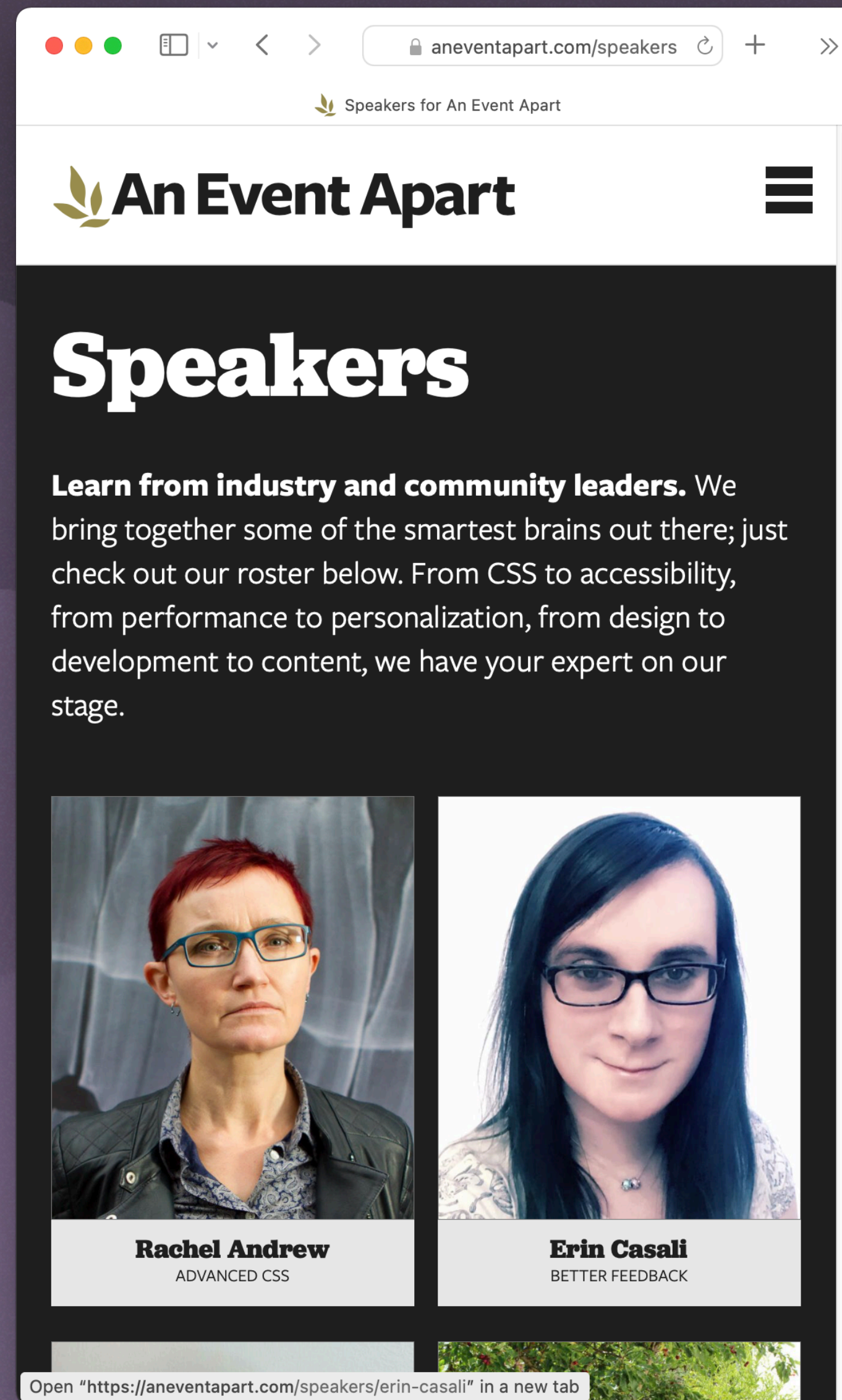
Page Width: *Responsive*



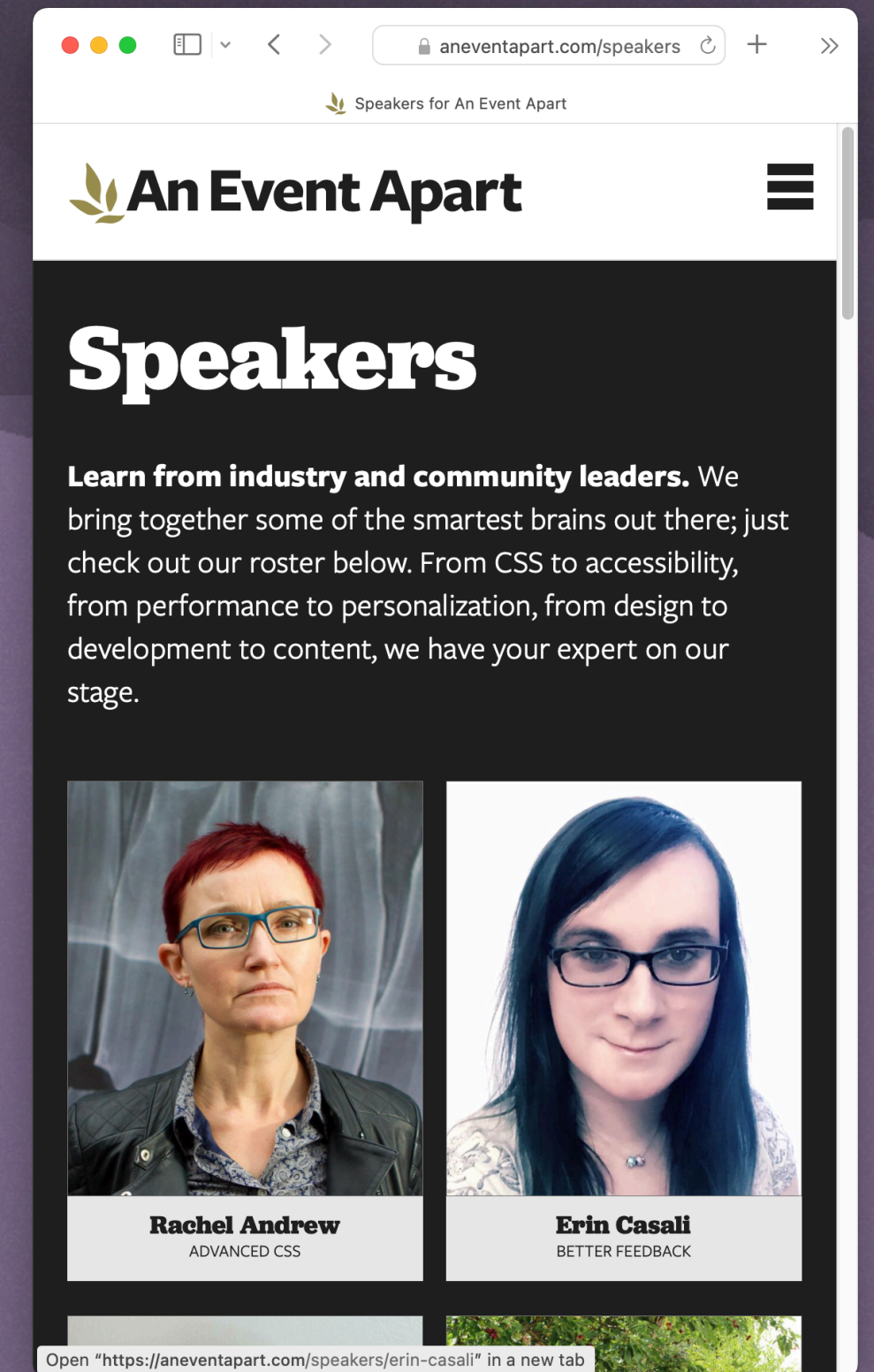
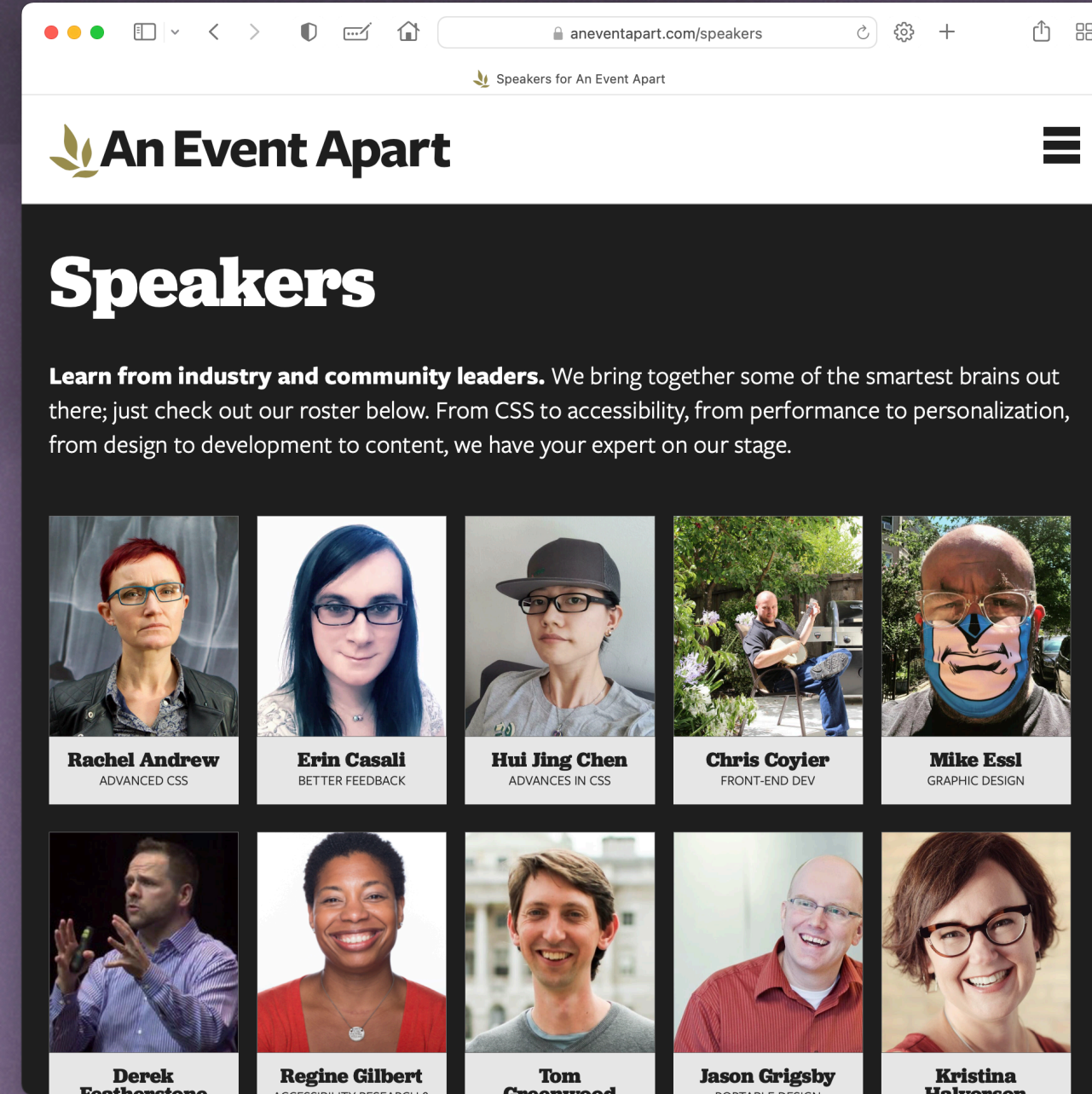
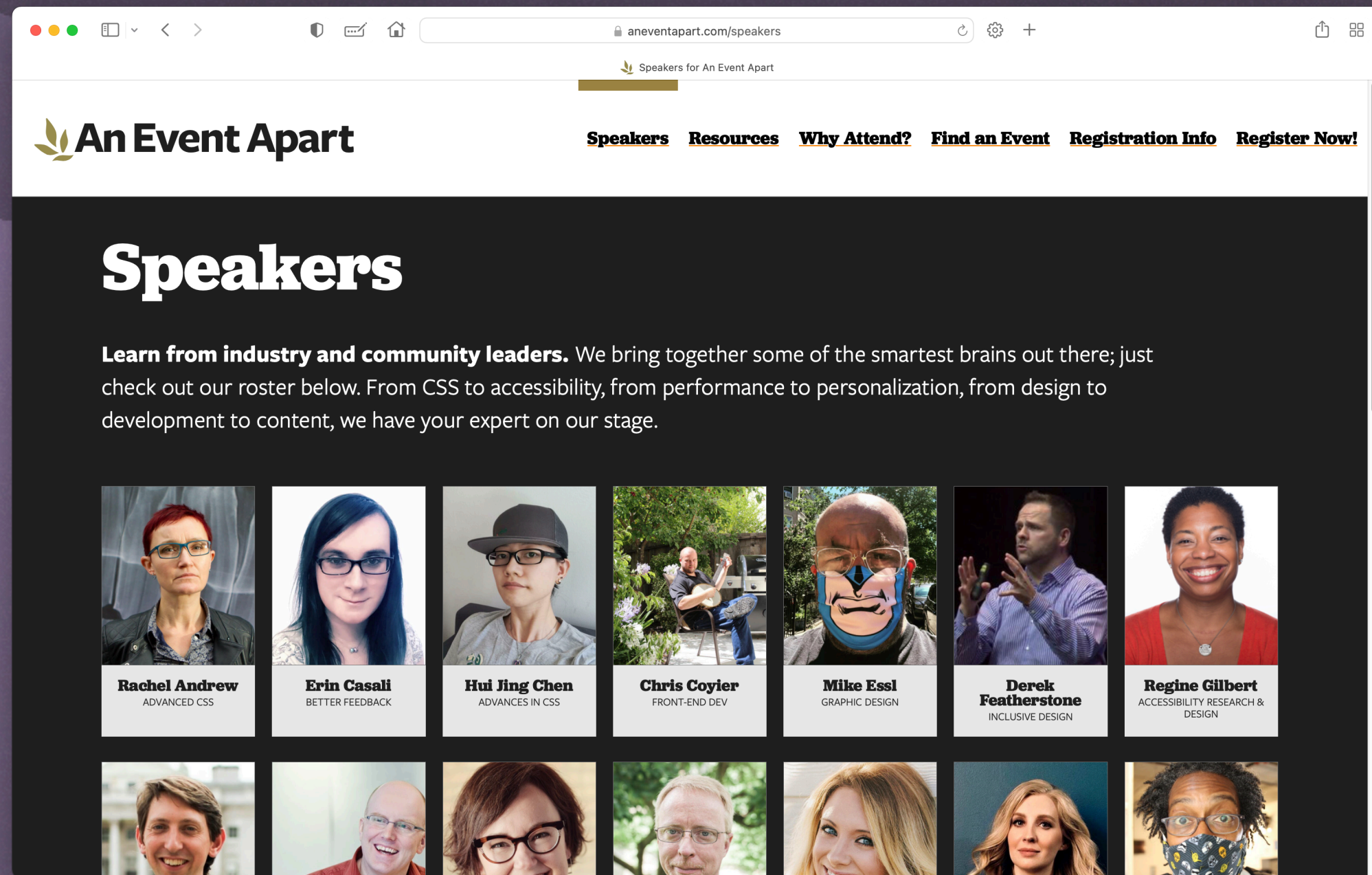
Page Width: *Responsive*



Page Width: *Responsive*



Page Width: *Responsive*



Speakers

Learn from industry and community leaders. We bring together some of the smartest brains out there; just check out our roster below. From CSS to accessibility, from performance to personalization, from design to development to content, we have your expert on our stage.



Rachel Andrew
ADVANCED CSS



Erin Casali
BETTER FEEDBACK



Hui Jing Chen
ADVANCES IN CSS



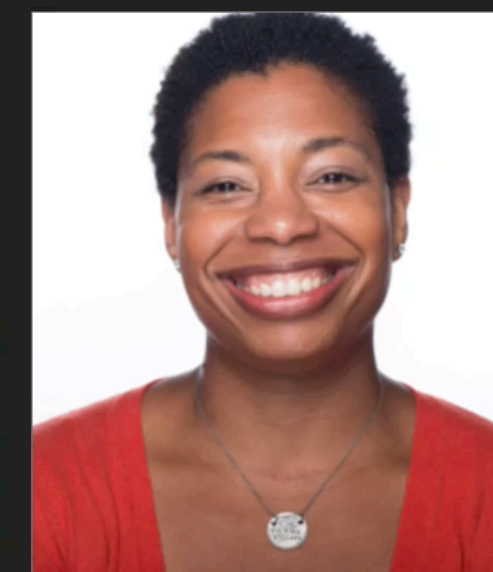
Chris Coyier
FRONT-END DEV



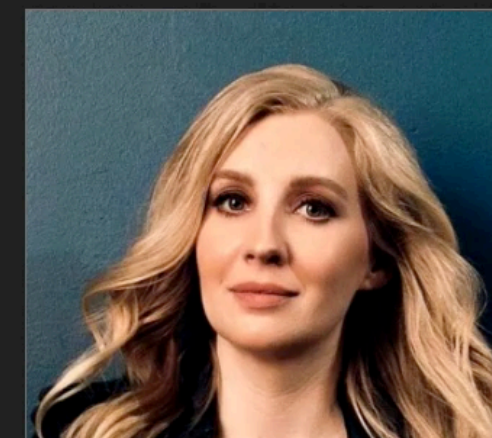
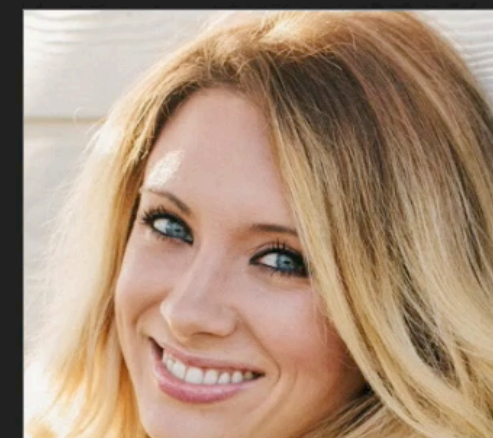
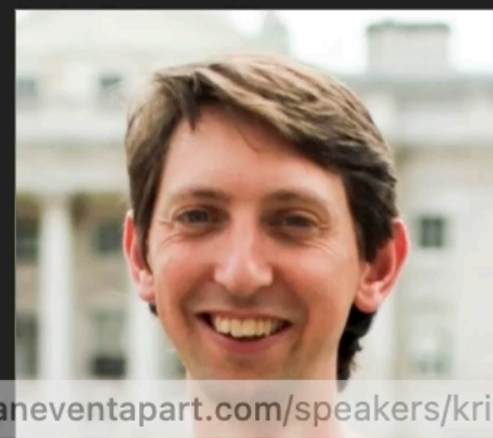
Mike Essl
GRAPHIC DESIGN



Derek Featherstone
INCLUSIVE DESIGN



Regine Gilbert
ACCESSIBILITY RESEARCH & DESIGN



VC 235 :: Course Home

VC235

WINTER 2025

INTERFACE DESIGN

HOME

SYLLABUS

CALENDAR

PROJECTS

LABS

LINKS

REFERENCES

Course Home

21 JAN

Week Three Tuesday Class Session

Resources and links for our Tuesday of Week Three meeting.

Design Lab

03 Working with Frames & Assets in Figma

16 JAN

Week Two Thursday Class Session

Resources and links for our Thursday of Week Two meeting.

Class Notes

Introduction to Figma Design

Links

Figma

Sketch

Adobe XD

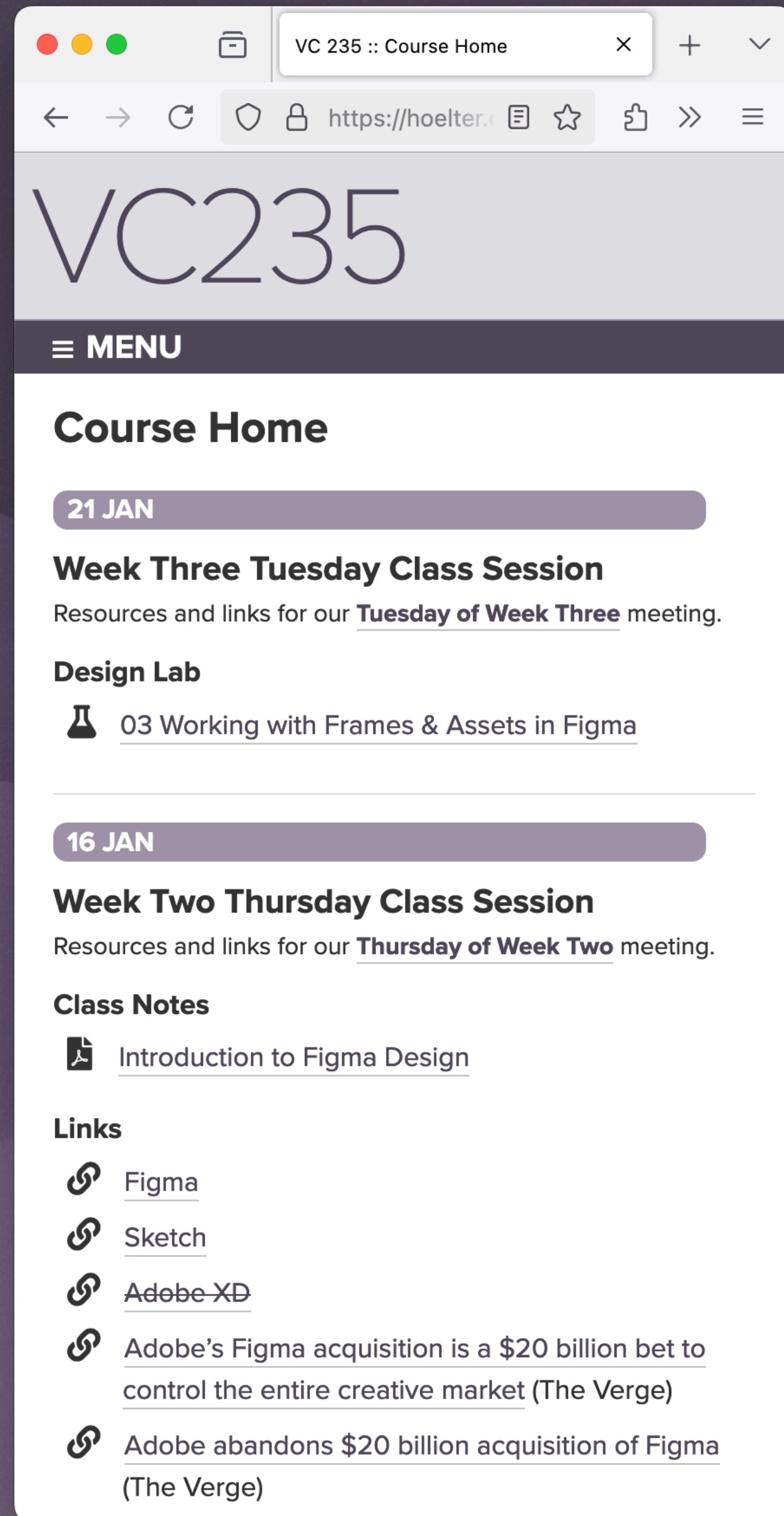
Adobe's Figma acquisition is a \$20 billion bet to control the entire creative market (The Verge)

Adobe abandons \$20 billion acquisition of Figma (The Verge)

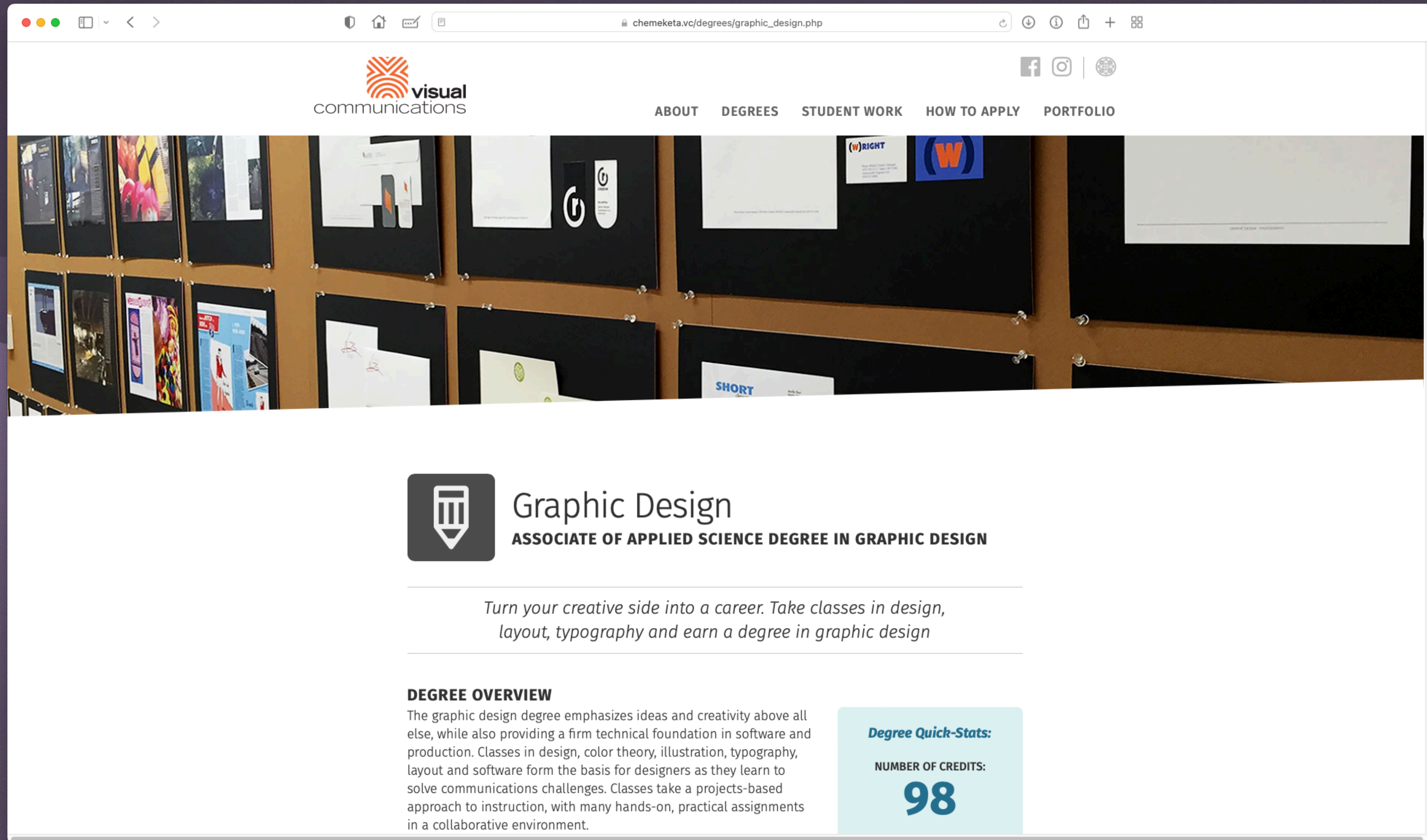
14 JAN

Week Two Tuesday Class Session

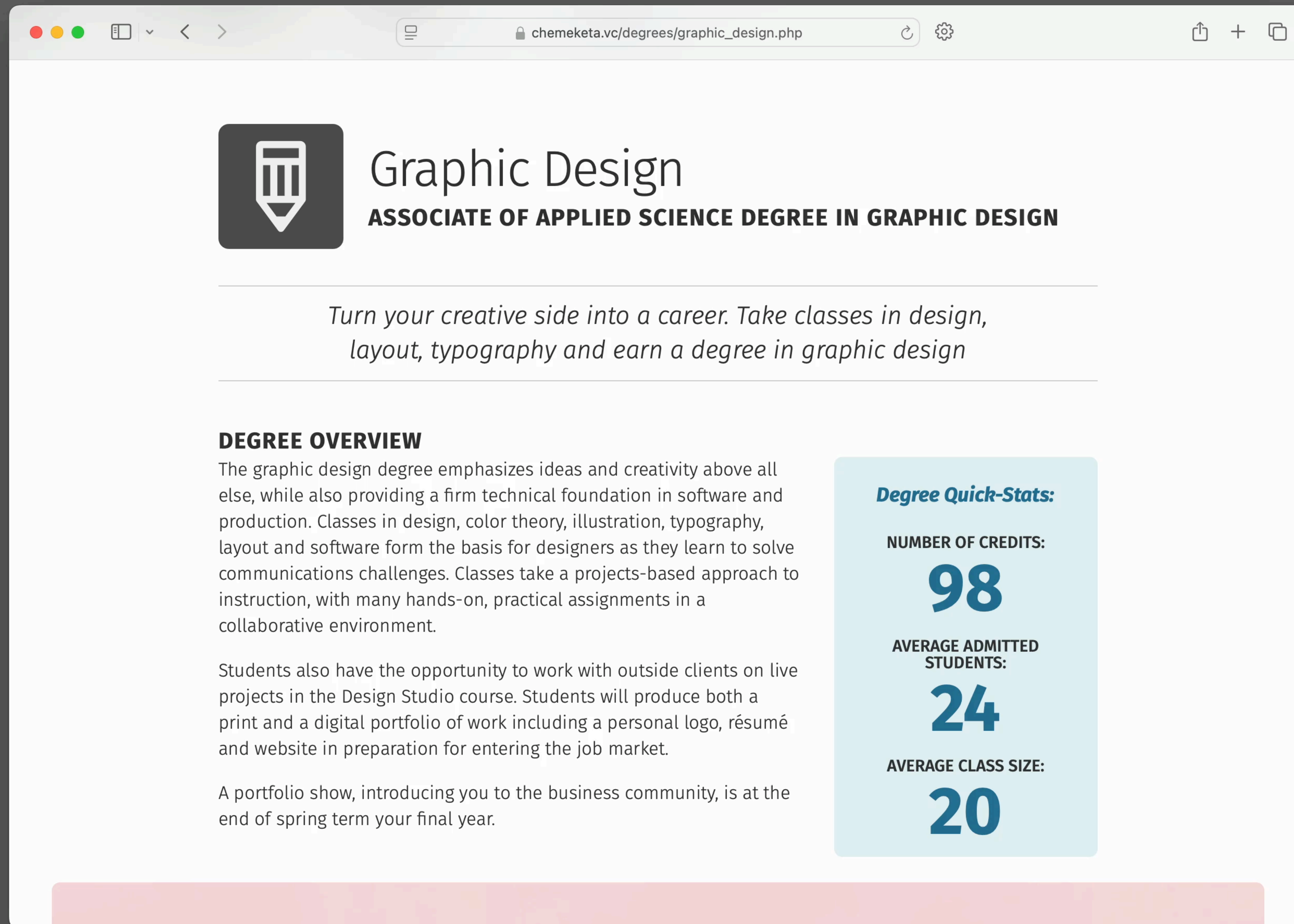
Resources and links for our Tuesday of Week Two meeting.



Page Width: *Responsive with Fixed Max Content Width*



Page Width: *Responsive with Fixed Max Content Width*



1920x1080

22.98%

1536x864

11.45%

1366x768

11.4%

1280x720

6.19%

1280x960

5.17%

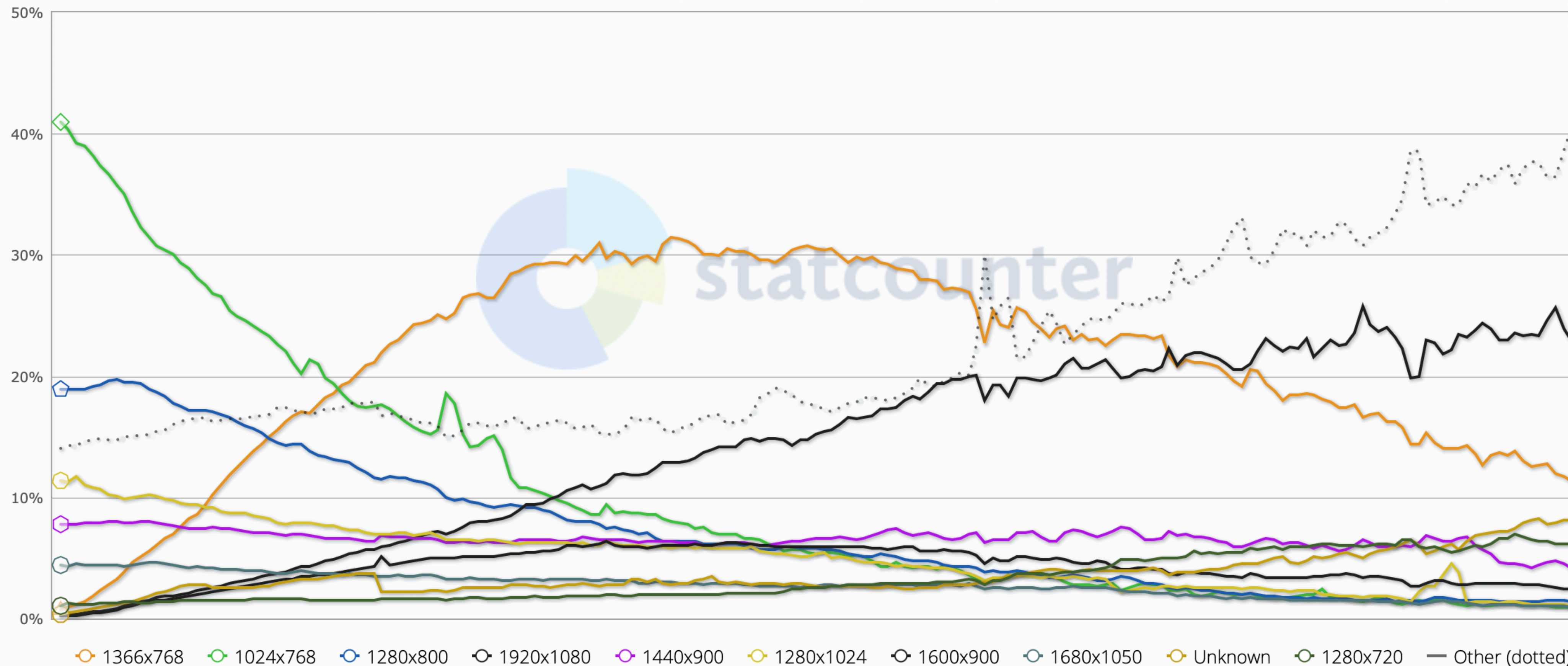
1440x900

4.17%

Desktop Screen Resolution Stats Worldwide - December 2024

Desktop Screen Resolution Stats Worldwide

Mar 2009 - Jan 2025

[Edit Chart Data](#)

38%

1920x1080

22.98%

1536x864

11.45%

1366x768

11.4%

1280x720

6.19%

1280x960

5.17%

1440x900

4.17%

Desktop Screen Resolution Stats Worldwide - December 2024

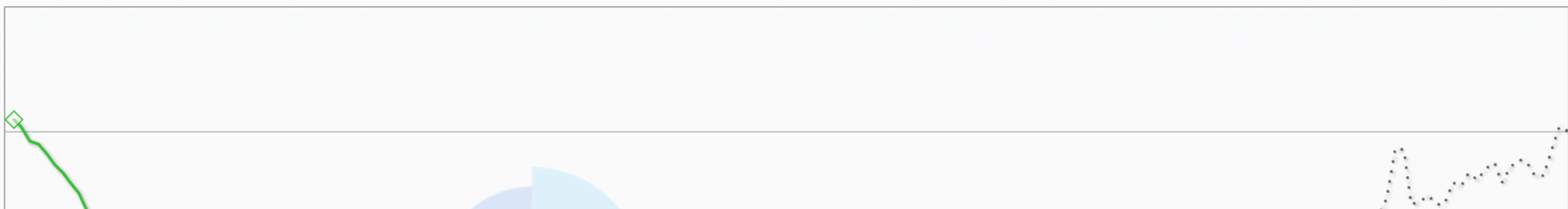
Desktop Screen Resolution Stats Worldwide

Mar 2009 - Jan 2025

Edit Chart Data

50%

40%



Page Width Notes

- Unlike print, you do not know the final size dimensions of the medium that will display the work. The end-user makes this determination.
- Most designers currently use between **960 and 1,100 pixels** as the maximum width of most Web content designed for desktop browsers.
- **Design for scalability**—create and arrange elements so that they can scale width-wise to accommodate different size screens (be *responsive*)
- Overall page must look OK when more width is available.
- All sites designed today should work well on mobile devices.

13" and 15" models with M2 chip

MacBook Air

Overview

Tech Specs

Compare

New to Mac

Buy

Display

Liquid Retina display

13.6-inch (diagonal) LED-backlit display with IPS technology;¹

2560-by-1664 native resolution at 224 pixels per inch

500 nits brightness

Color

Support for 1 billion colors

Wide color (P3)

True Tone technology



Display

Liquid Retina display

13.6-inch (diagonal) LED-backlit display with IPS technology;¹

2560-by-1664 native resolution at 224 pixels per inch

500 nits brightness

Color

Support for 1 billion colors

Wide color (P3)

True Tone technology

2,560px x 1,664px

2:1

2,560px x 1,664px

1,280 x 832

Virtual Pixels (CSS Pixels)

1,280 x 832

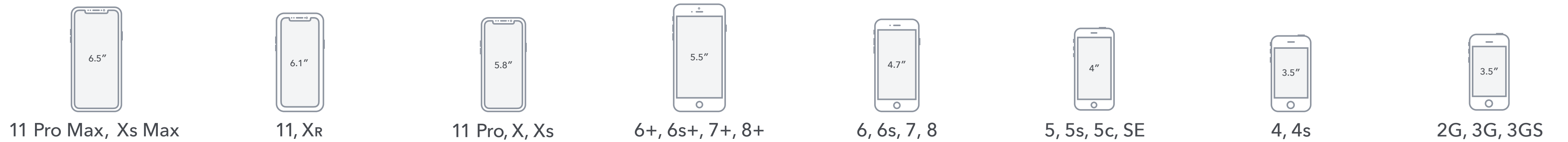
1,100

*Max Target Width
In Virtual Pixels (CSS Pixels)*

When you specify sizes in pixels,
you are actually addressing *virtual*
pixels, not actual display pixels.



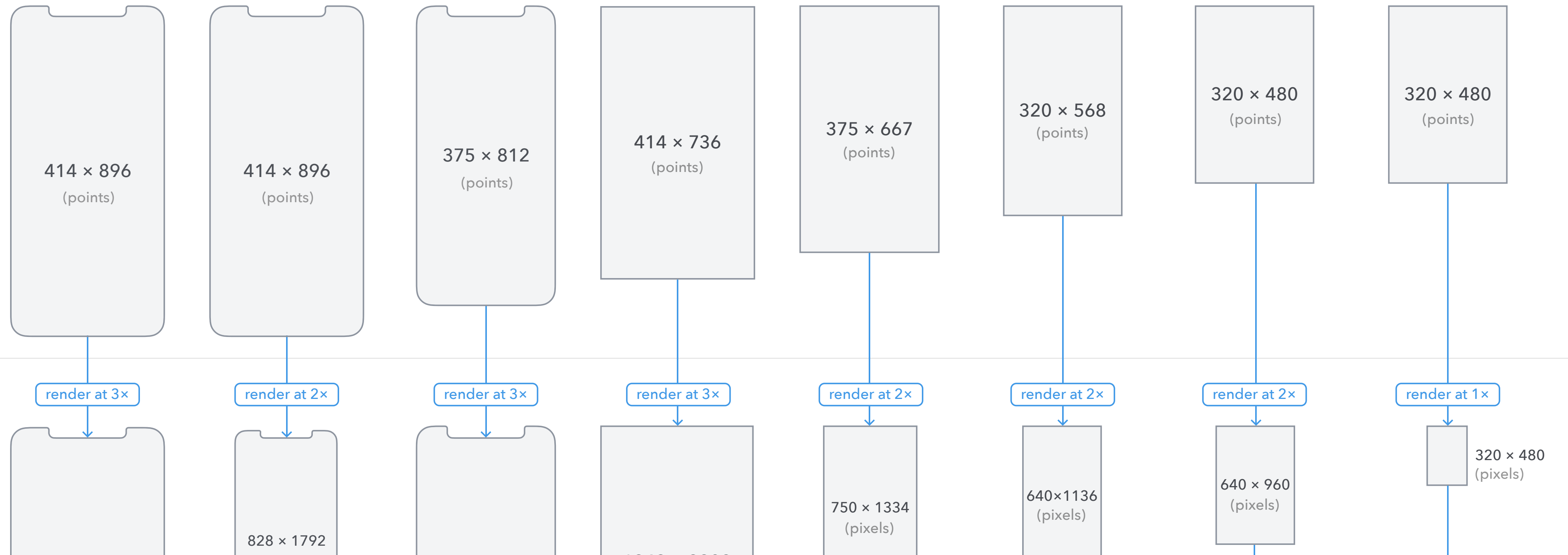
The Ultimate Guide to iPhone Resolutions, by PaintCode



Points

At the beginning, coordinates of all drawings are specified in *points*.

Points are abstract units, they only make sense in this mathematical coordinate space.

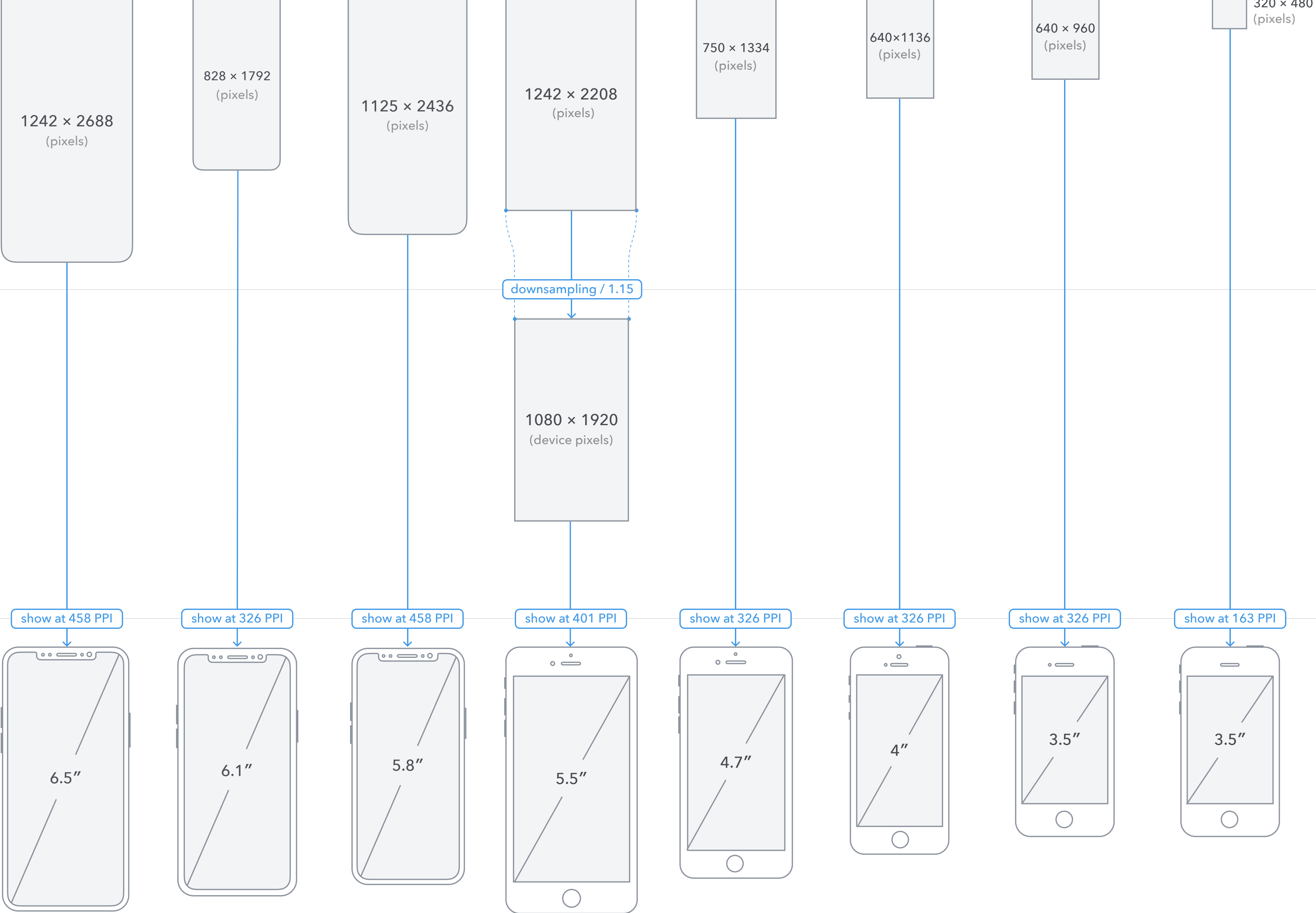


Rendered Pixels

Point-based drawings are rendered into pixels. This process is known as rasterization.

Point-based drawings are rendered into pixels. This process is known as rasterization.

Point coordinates are multiplied by scale factor to get pixel coordinates. Higher scale factors result in higher level of detail.



Physical Pixels

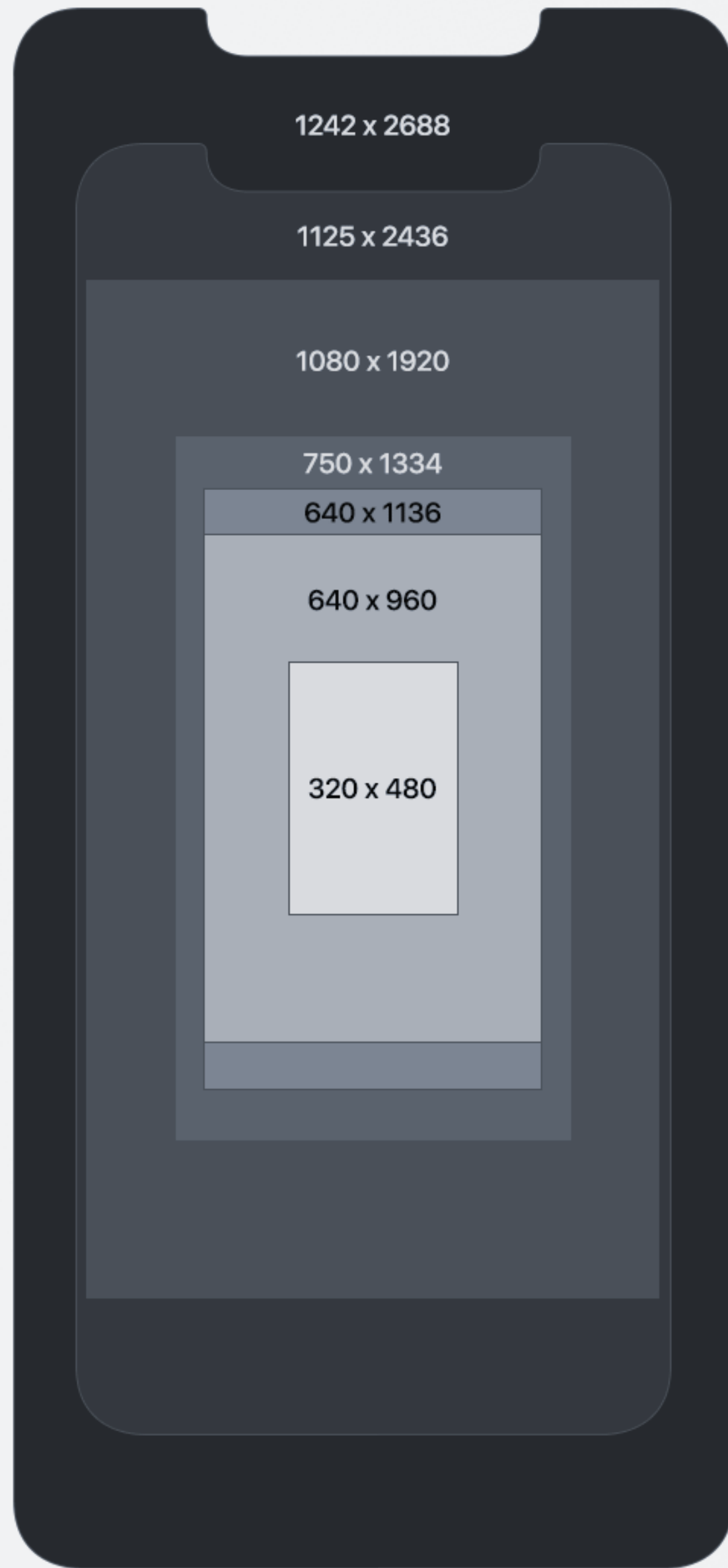
The device screen may have lower pixel resolution than the image rendered in previous step.

Before the image can be displayed, it must be downsampled (resized) to lower pixel resolution.

Physical Device

Finally, computed pixels are displayed on the physical screen.

The PPI number tells you how many pixels fit into one inch and thus how large the pixels appear in the real world.



iPhone XS Max

iPhone XS, X

iPhone 8, 7, 6s, 6 Plus

iPhone 8, 7, 6s, 6

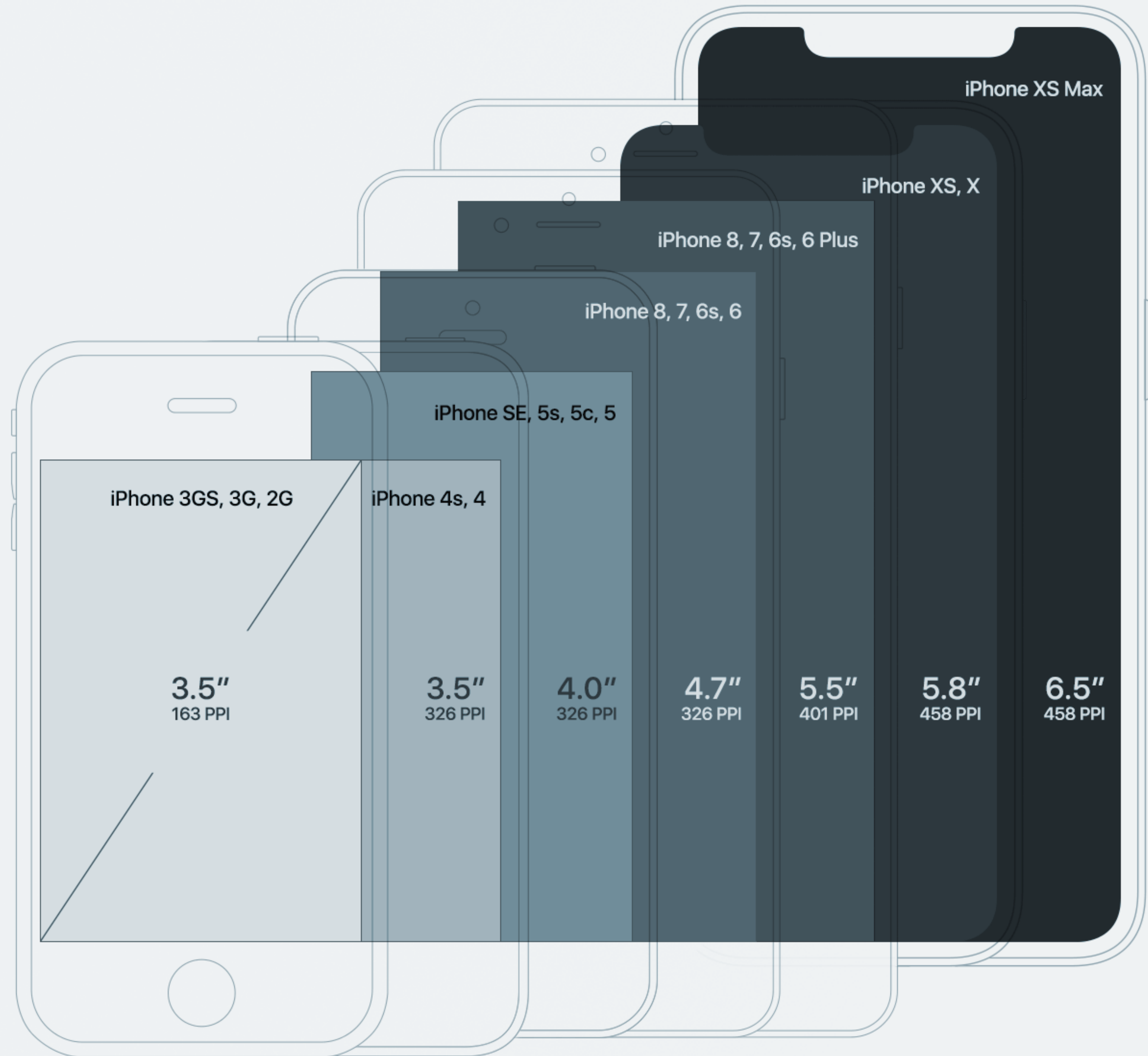
iPhone SE, 5s, 5c, 5

iPhone 4s, 4

iPhone 3GS, 3G, 2G

iPhone

◀ Screen Resolution | Size ▶
Through the Years



The background is a solid dark purple color. Overlaid on this are several layers of lighter purple, wavy, horizontal bands that create a sense of depth and movement, resembling stylized hills or waves. The text 'Why Mobile?' is centered in the middle of the image.

Why Mobile?

Mobile

63.06%

Desktop

35.08%

Tablet

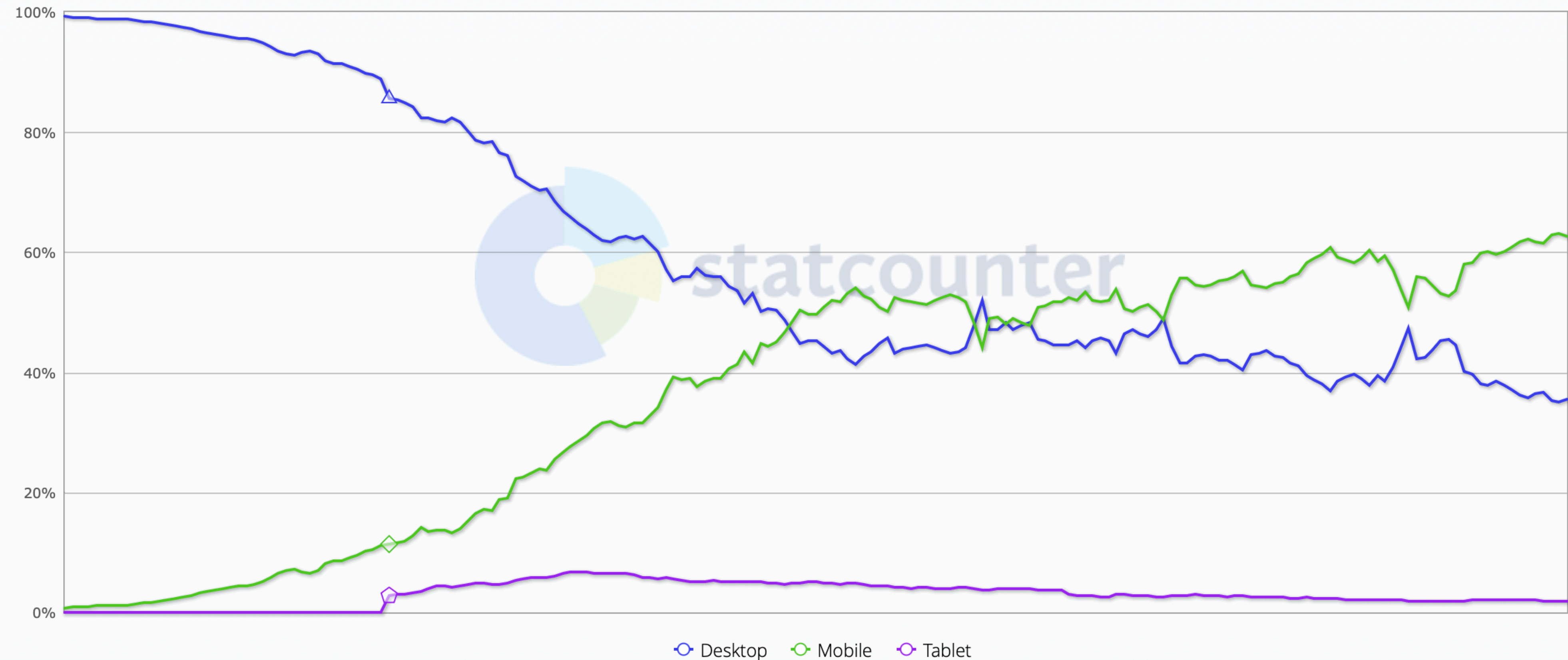
1.86%

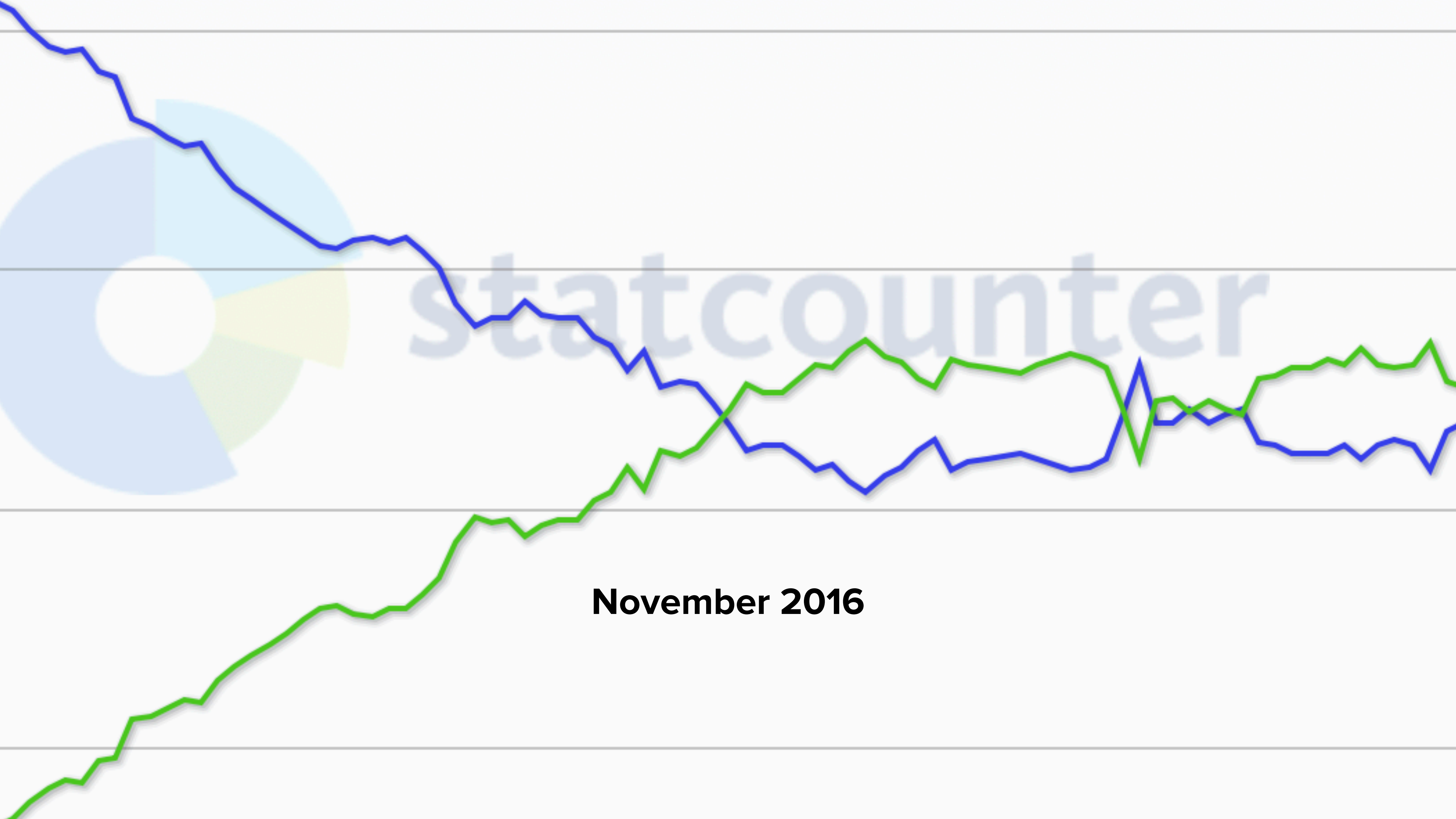
Desktop vs Mobile vs Tablet Market Share Worldwide - December 2024

Desktop vs Mobile vs Tablet Market Share Worldwide

Mar 2009 - Jan 2025

Edit Chart Data

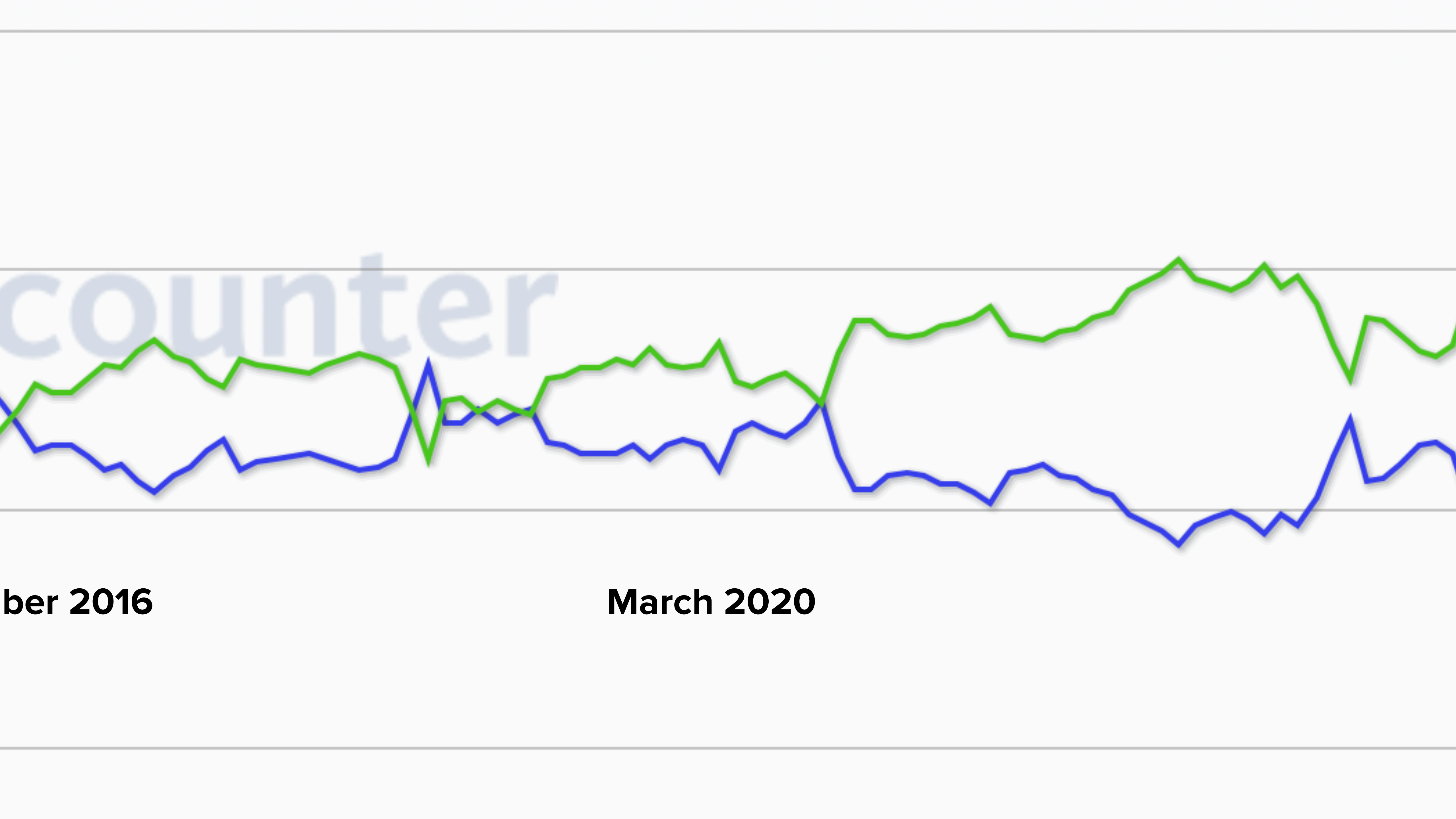




counter

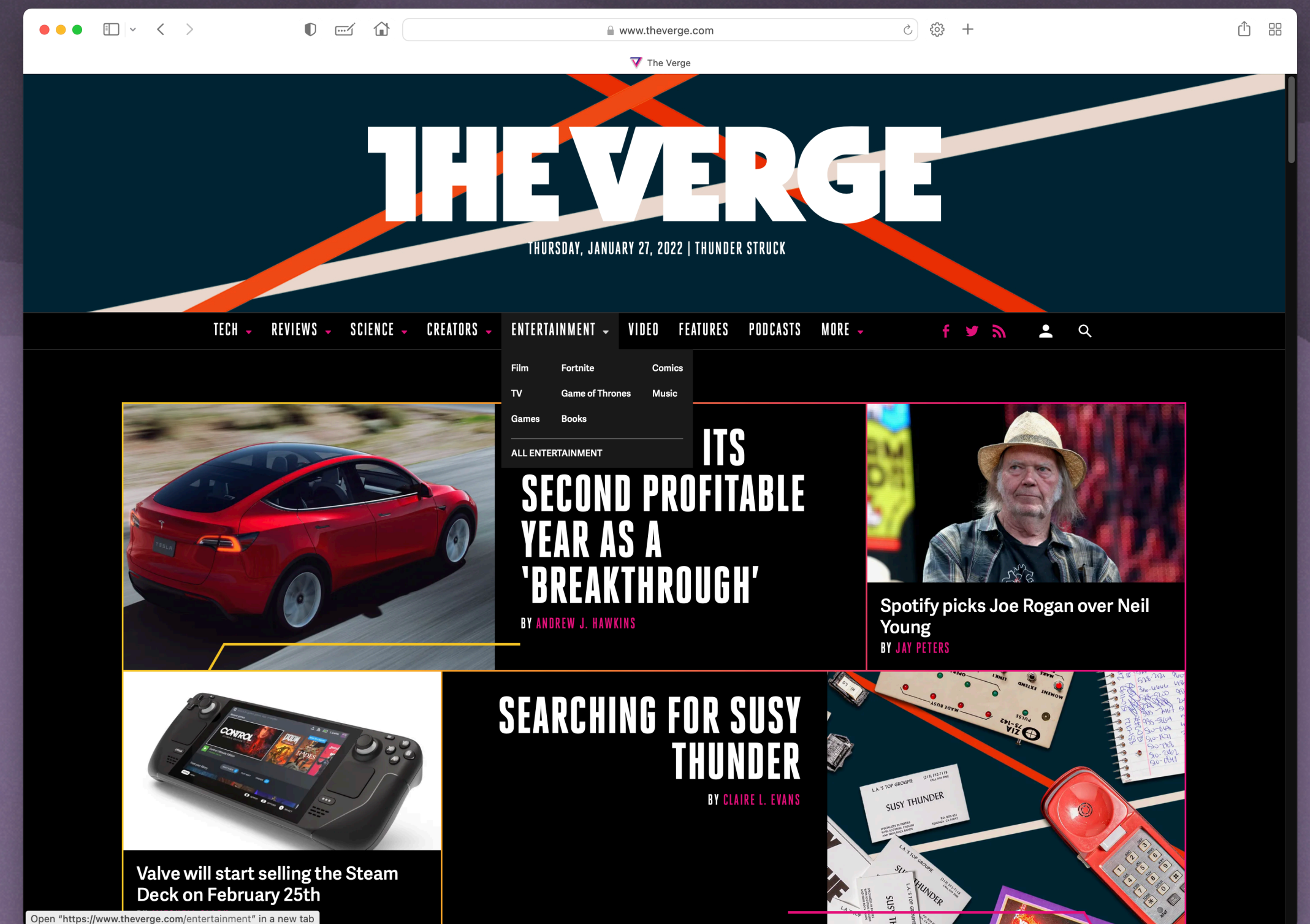
ber 2016

March 2020



Page Length is Unlimited

- It is a given that most Web pages will scroll vertically.
- Vertical space is “free” and (technically) unlimited.
- In most circumstances, there is no need to use the “page 1 / page 2” metaphor



THE VERGE

THURSDAY, JANUARY 27, 2022 | THUNDER STRUCK

TECH ▾ REVIEWS ▾ SCIENCE ▾ CREATORS ▾ ENTERTAINMENT ▾ VIDEO FEATURES PODCASTS MORE     

Visa is a network giving small businesses more ways to win.



VISA



Proud Sponsor



TESLA HAILS ITS SECOND PROFITABLE YEAR AS A BREAKTHROUGH



Apple creates personal safety guide as AirTag concerns mount

BY VICTORIA SONG



Uber sued for \$63 million by man who was paralyzed in a crash

BY KIM LYONS



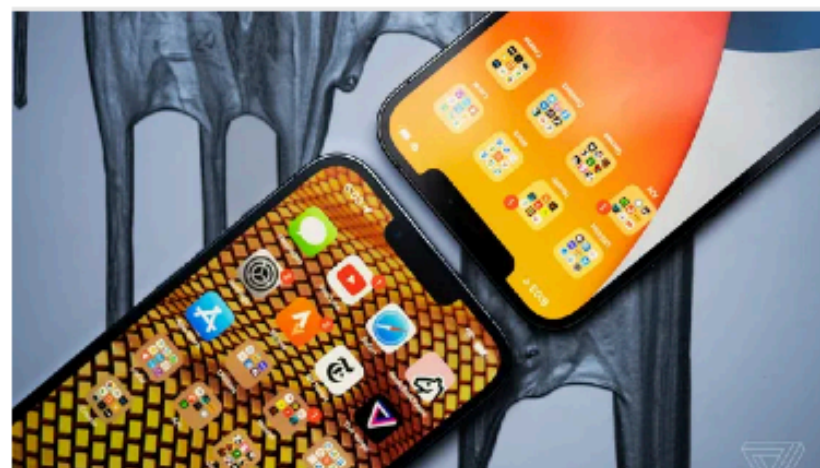
Boston Dynamics' most boring robot is getting a sensible job unloading trucks

BY JAMES VINCENT

You no longer have to say 'Hey Google' to get the Assistant to shut up

BY MITCHELL CLARK

SAYING (OR YELLING) "STOP" IS JUST SO INSTINCTIVE



iPhones will soon accept contactless payments directly, says report

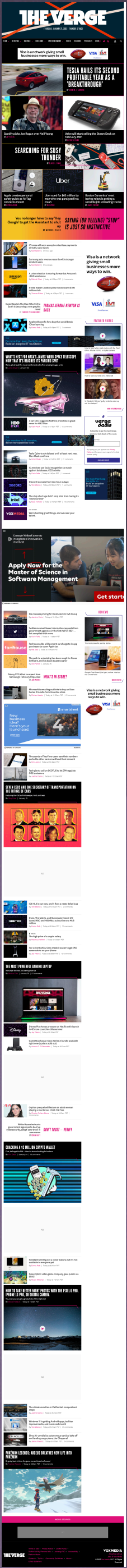
By Sam Byford | An hour ago



Samsung sets revenue records with stronger product sales

By Sam Byford | 2 hours ago

Visa is a network giving small businesses more



Ray Jardine's rayjardine.com Adventure Page

Ray Jardine, author: *Trail Life*, *Beyond Backpacking*, *The Ray-Way Tarp Book*, *Siku Kayak*, *The PCT Hiker's Handbook*, *The CDT Pocket Planner*. This site features a collection of adventure stories and articles about long distance, lightweight hiking and backpacking, Baja and Arctic sea kayaking, Barrenlands canoeing, round-the-world sailing, skydiving, ocean rowing, bicycle touring, knifemaking, snowkiting, skiing to the South Pole, mountaineering, and more!

5,706,534 visitors

News

Click on the above link to find out what is happening.

[Profile](#)
[Chronologies](#)

[Trail Life](#)

[Ray's Website](#)

[ORDER FORM](#)

[Sewing Tips](#)

[why-sew?](#)

[Ray Way](#)

[Trail-Life](#)

[Quilt-Kit](#)

[Snowbag-Kit](#)

[Storage-Bag-Kit](#)

[Bottlecone](#)

[Q-Updates](#)

[Backpack-Kit](#)

[Ba-Pocket](#)

[Ba-Colars](#)

[BP-Video](#)

[Ba-Updates](#)

[Tarp-Kit](#)

[Urethane](#)

[BarWing](#)

[Saddle](#)

[Tarp-Book](#)

[TB-Updates](#)

[Bomber-Hat-Kit](#)

[Knife-Kit](#)

[Sharpening-Kit](#)

[Smooth-Kit](#)

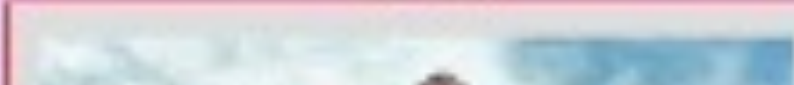
[Sewing-Thread](#)

2010



Ray has finished his [TransAm-2010](#) cycling trip,
3,783 miles in 54 days.

2010



[Skiing to South Pole](#)
750 mi in 57 days.

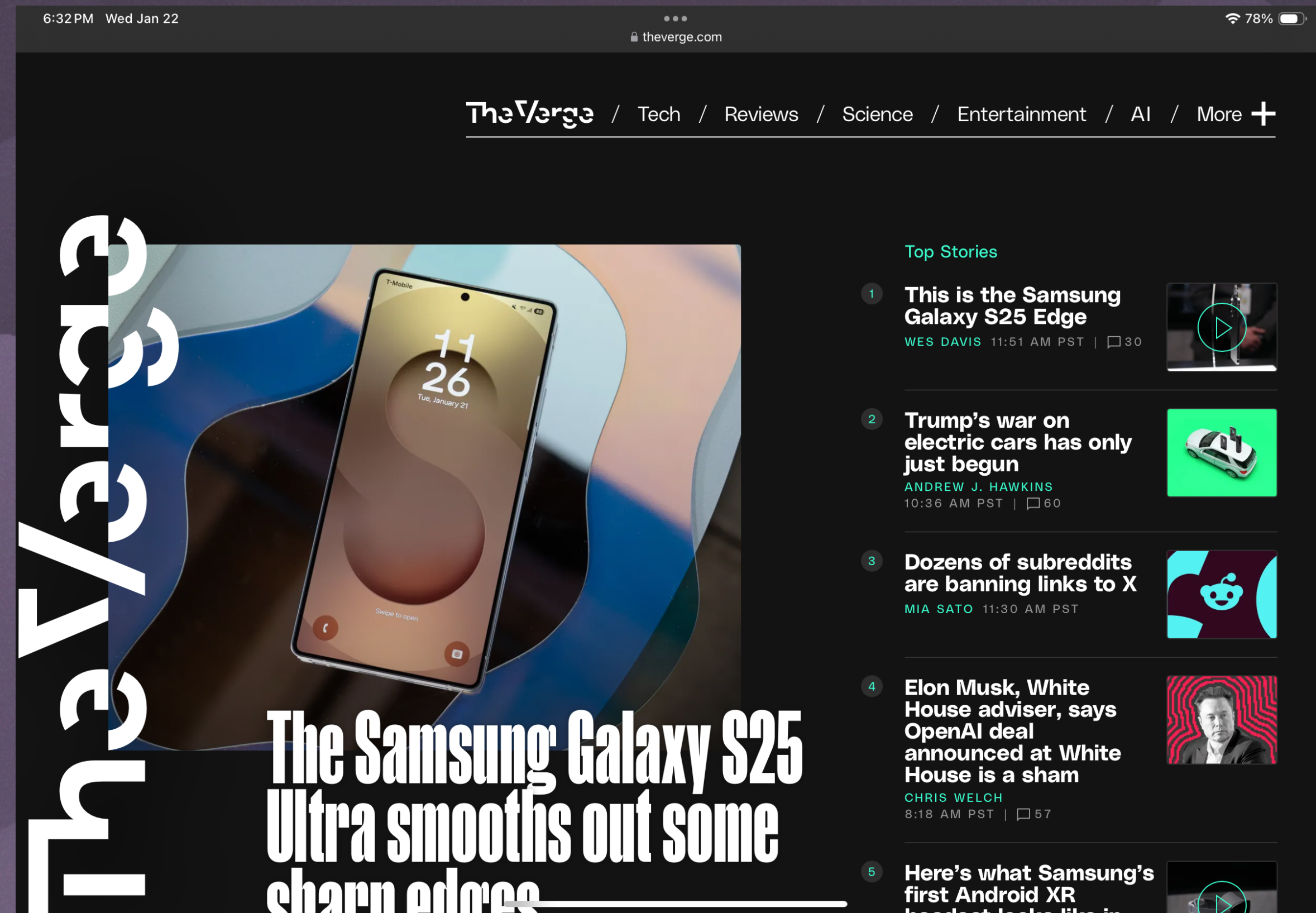


[Rowing across the Atlantic](#)
3,000 miles in 53 days
[See also](#)





Both width and length can change at any time



WEB PRESENTATION

Cascading Style Sheets

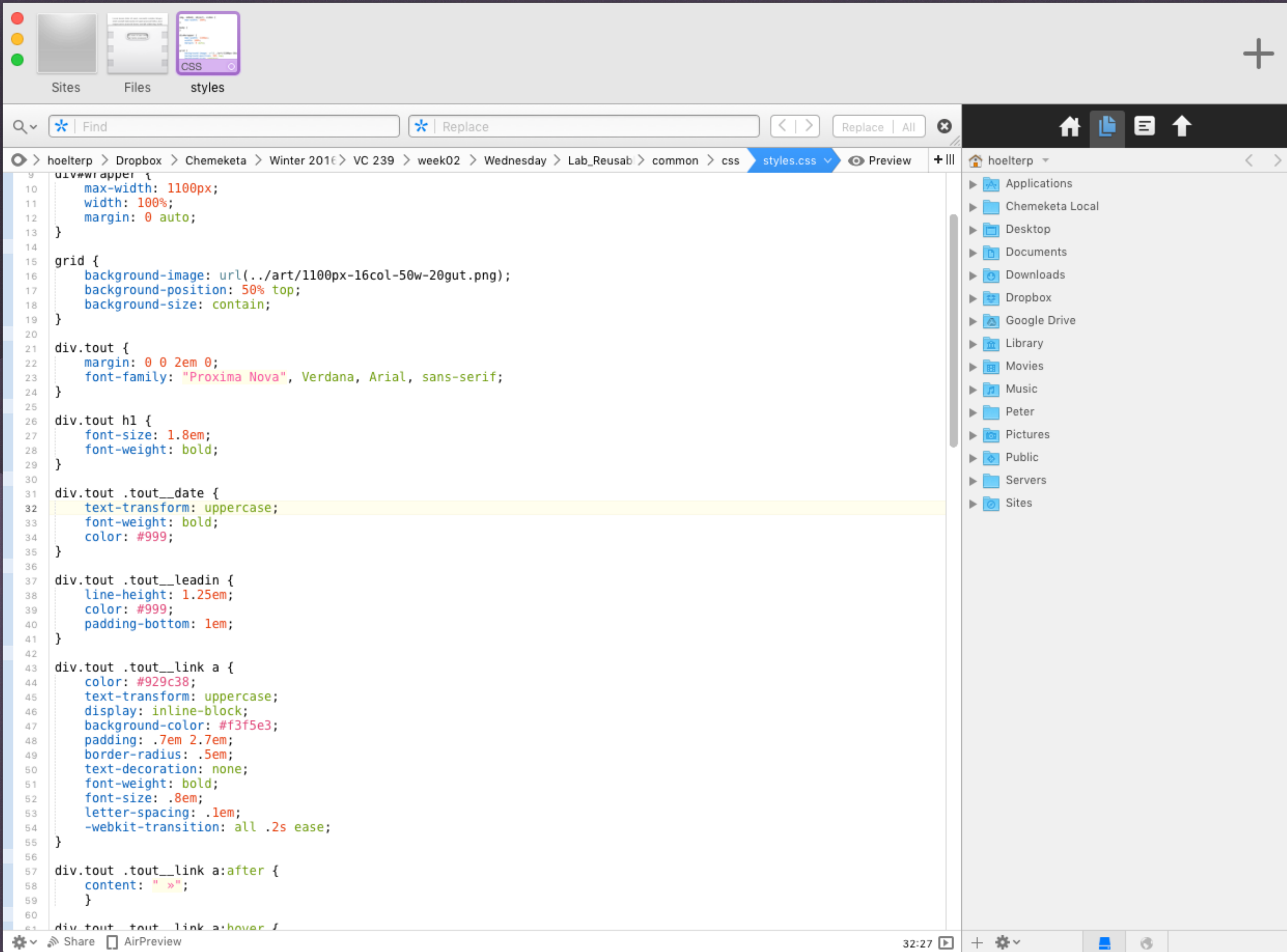
(REMEMBER ANYTHING FROM VC237?)

[HOME](#)[BIOGRAPHY](#)[PORTFOLIO](#)[FUN FACTS](#)[CONTACT ME](#)

Portfolio

This portfolio consists of seven of my top pieces that I created revolving around the theme of JDM cars. Each piece focuses on a different car. I am really passionate about Japanese car culture, and hope to share that interest with you.

THAT WAS ALL HTML AND CSS...



Find Replace

hoelterp > Dropbox > Chemeketa > Winter 2016 > VC 239 > week02 > Wednesday > Lab_Reusab > common > css > styles.css Preview

```
9 div#wrapper {
10     max-width: 1100px;
11     width: 100%;
12     margin: 0 auto;
13 }
14
15 grid {
16     background-image: url(../art/1100px-16col-50w-20gut.png);
17     background-position: 50% top;
18     background-size: contain;
19 }
20
21 div.tout {
22     margin: 0 0 2em 0;
23     font-family: "Proxima Nova", Verdana, Arial, sans-serif;
24 }
25
26 div.tout h1 {
27     font-size: 1.8em;
28     font-weight: bold;
29 }
30
31 div.tout .tout__date {
32     text-transform: uppercase;
33     font-weight: bold;
34     color: #999;
35 }
36
37 div.tout .tout__leadin {
38     line-height: 1.25em;
39     color: #999;
40     padding-bottom: 1em;
41 }
42
43 div.tout .tout__link a {
44     color: #929c38;
45     text-transform: uppercase;
46     display: inline-block;
47     background-color: #f3f5e3;
48     padding: .7em 2.7em;
49     border-radius: .5em;
50     text-decoration: none;
51     font-weight: bold;
52     font-size: .8em;
53     letter-spacing: .1em;
54     -webkit-transition: all .2s ease;
55 }
56
57 div.tout .tout__link a:after {
58     content: "»";
59 }
60
61 div.tout .tout__link a:hover {
```

hoelterp

- Applications
- Chemeketa Local
- Desktop
- Documents
- Downloads
- Dropbox
- Google Drive
- Library
- Movies
- Music
- Peter
- Pictures
- Public
- Servers
- Sites


```
14
15 grid {
16     background-image: url(../art/1100px-16col-50w-20gut.png);
17     background-position: 50% top;
18     background-size: contain;
19 }
20
21 div.tout {
22     margin: 0 0 2em 0;
23     font-family: "Proxima Nova", Verdana, Arial, sans-serif;
24 }
25
26 div.tout h1 {
27     font-size: 1.8em;
28     font-weight: bold;
29 }
30
31 div.tout .tout__date {
32     text-transform: uppercase;
33     font-weight: bold;
34     color: #999;
35 }
36
37 div.tout .tout__leadin {
38     line-height: 1.25em;
```


...and understanding HTML and CSS helps tremendously, even in web design work that doesn't require one line of code.

Cascading Style Sheets

- The best web designers I have known also knew at least some HTML and CSS.
- They represent the final representation of your designs—it only makes sense that you have some knowledge of how these “materials” come together to create the final product.
- You wouldn’t design something in a physical medium like tile, wood, or metal without having some understanding of the physical qualities of the material.



WEB PRESENTATION CSS Layout

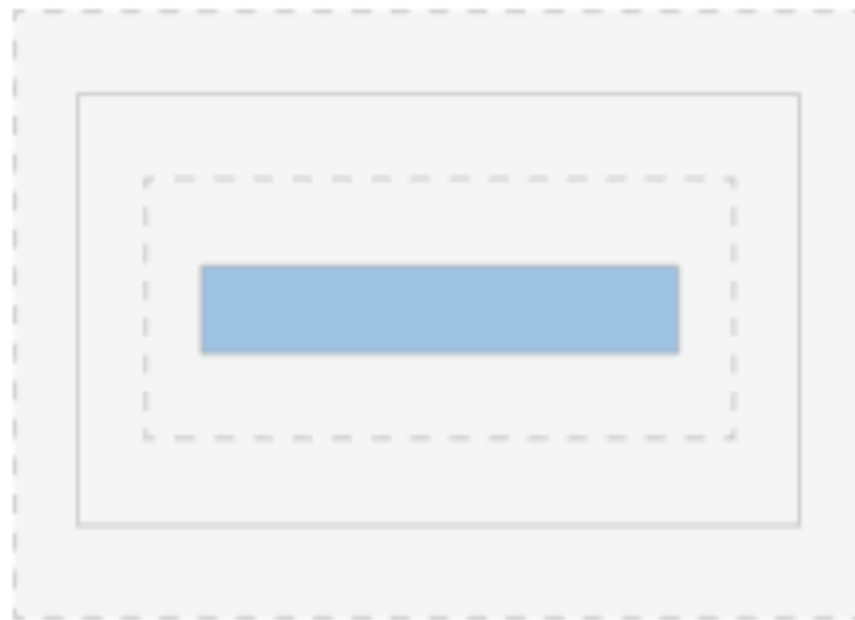
Floats, Flexbox & CSS Grid

- Everything is a Box
- Aligning items to a grid
- Specific positions (fixed items)
- Flexible, responsive Web design
- CSS Grid



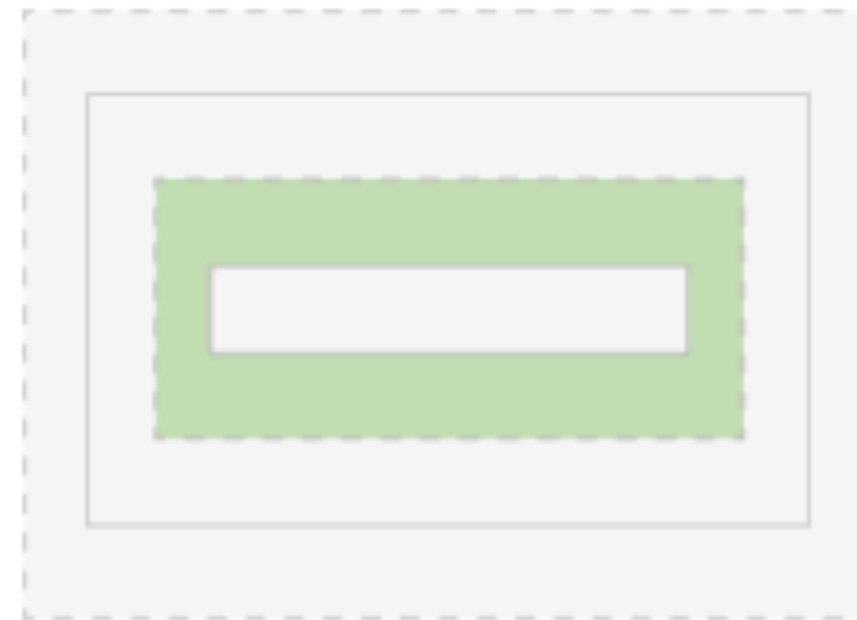
CSS Box Model

It's important to understand the basics, like how elements are generated and behave in the browser, before diving into responsive web design. The CSS Box Model consists of four distinct parts.



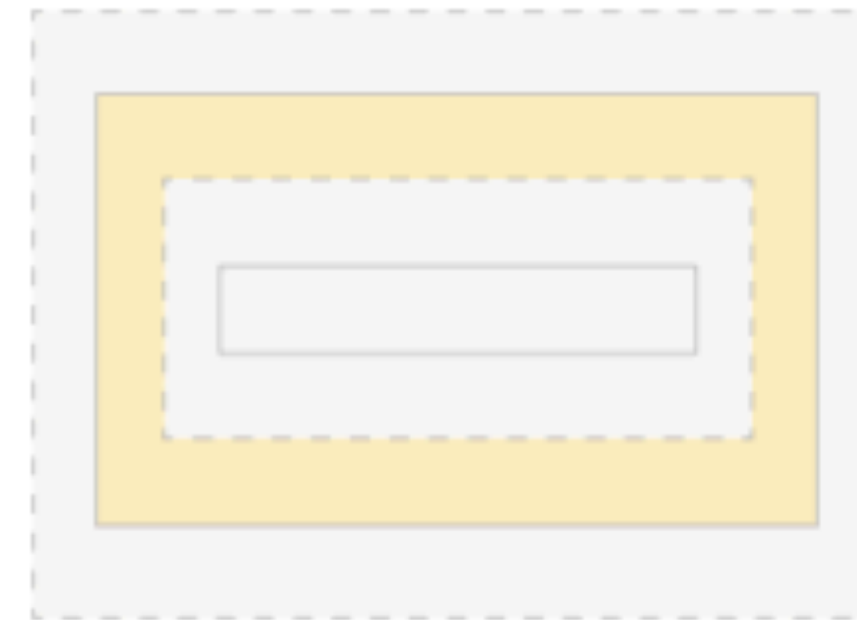
Content

The content of the box, where text and images appear.



Padding

Clears an area around the content.



Border

A border that goes around the padding.



Margin

Clears an area around the border.



Turn your creative side into a career. Take classes in design, layout, typography and earn a degree in graphic design

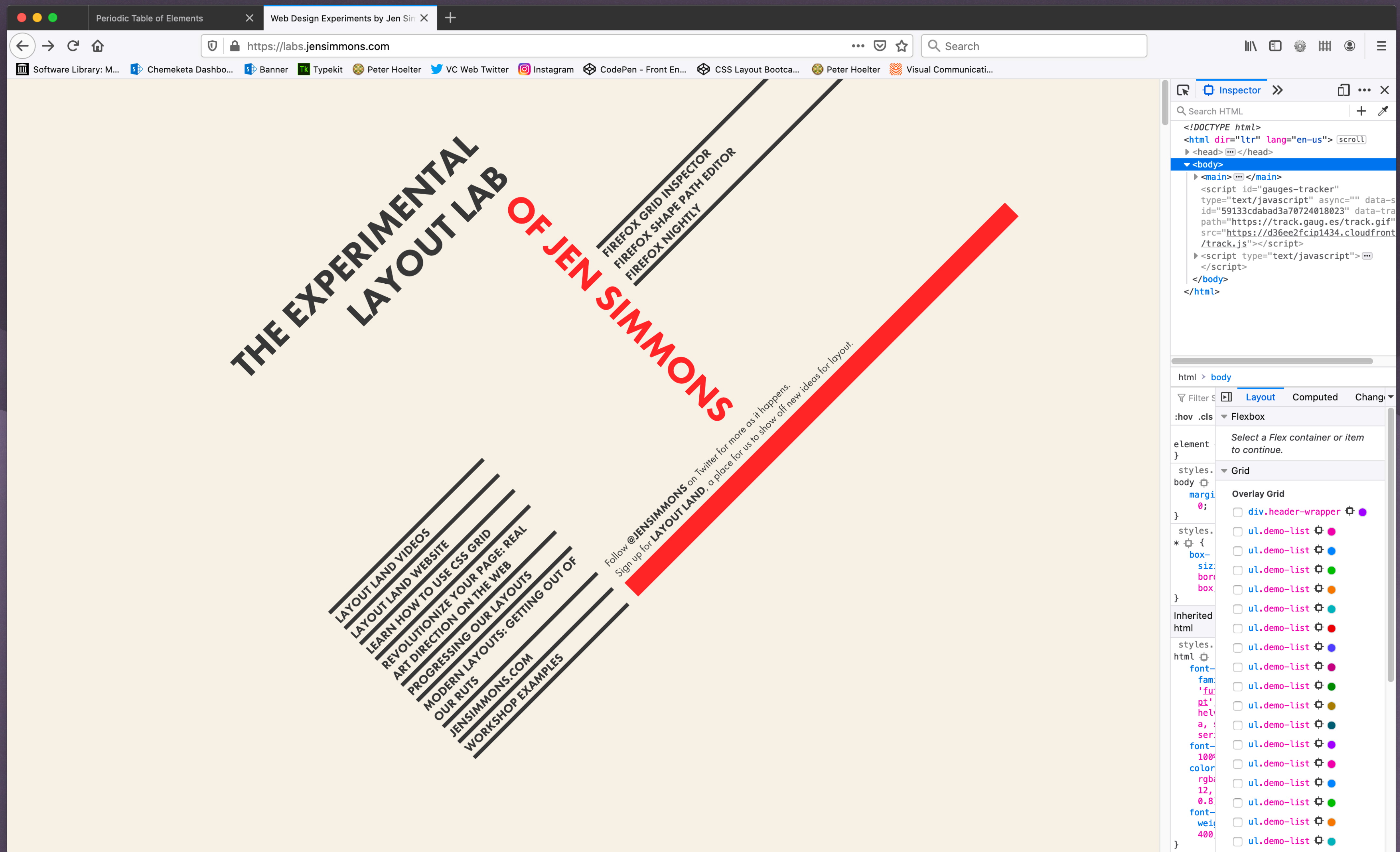
DEGREE OVERVIEW

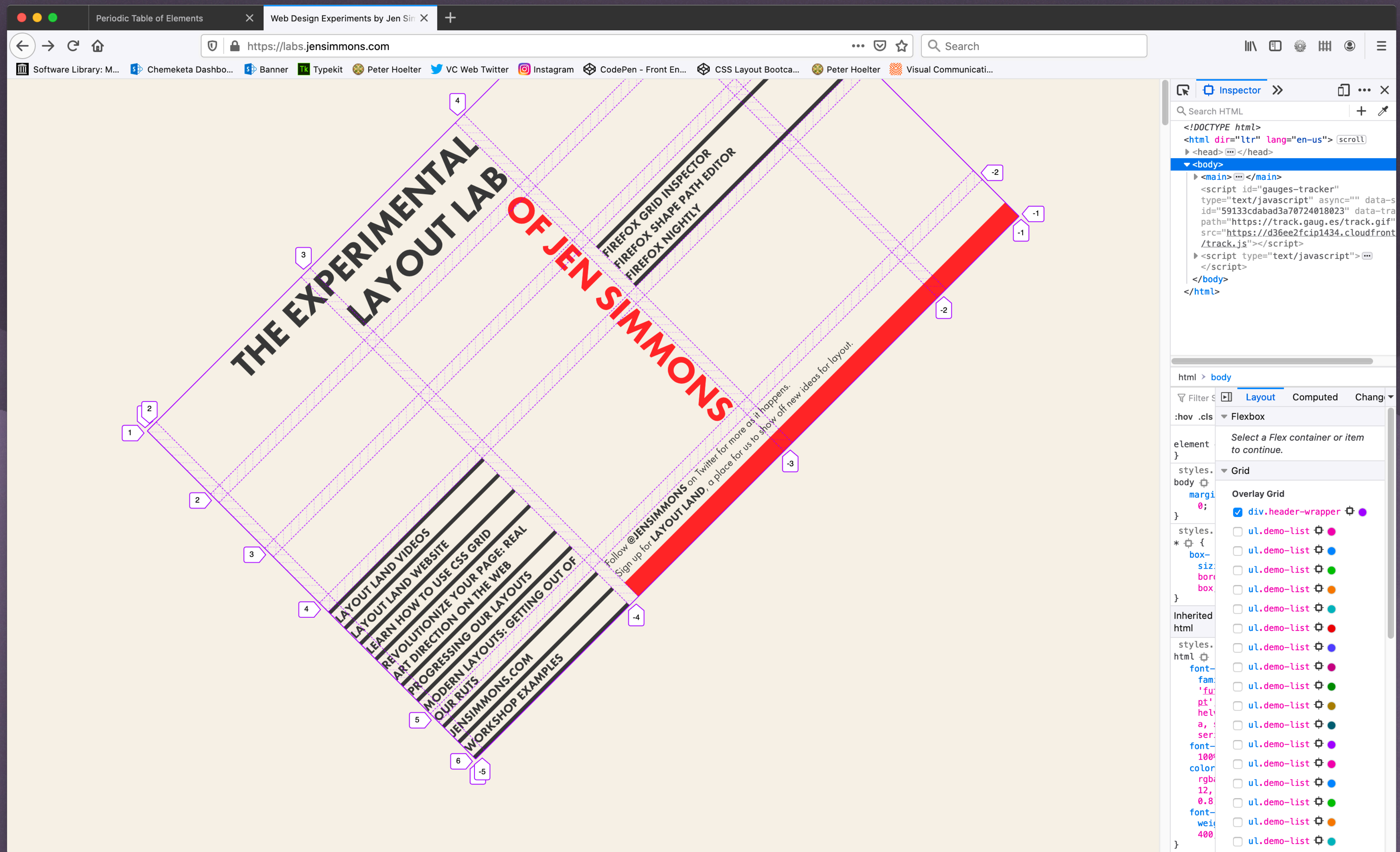
The graphic design degree emphasizes ideas and creativity above all else, while also providing a firm technical foundation in software and production. Classes in design, color theory, illustration, typography, layout and software form the basis for designers as they learn to solve communications challenges. Classes take a projects-based approach to instruction, with many hands-on, practical assignments in a

Degree Quick-Stats:

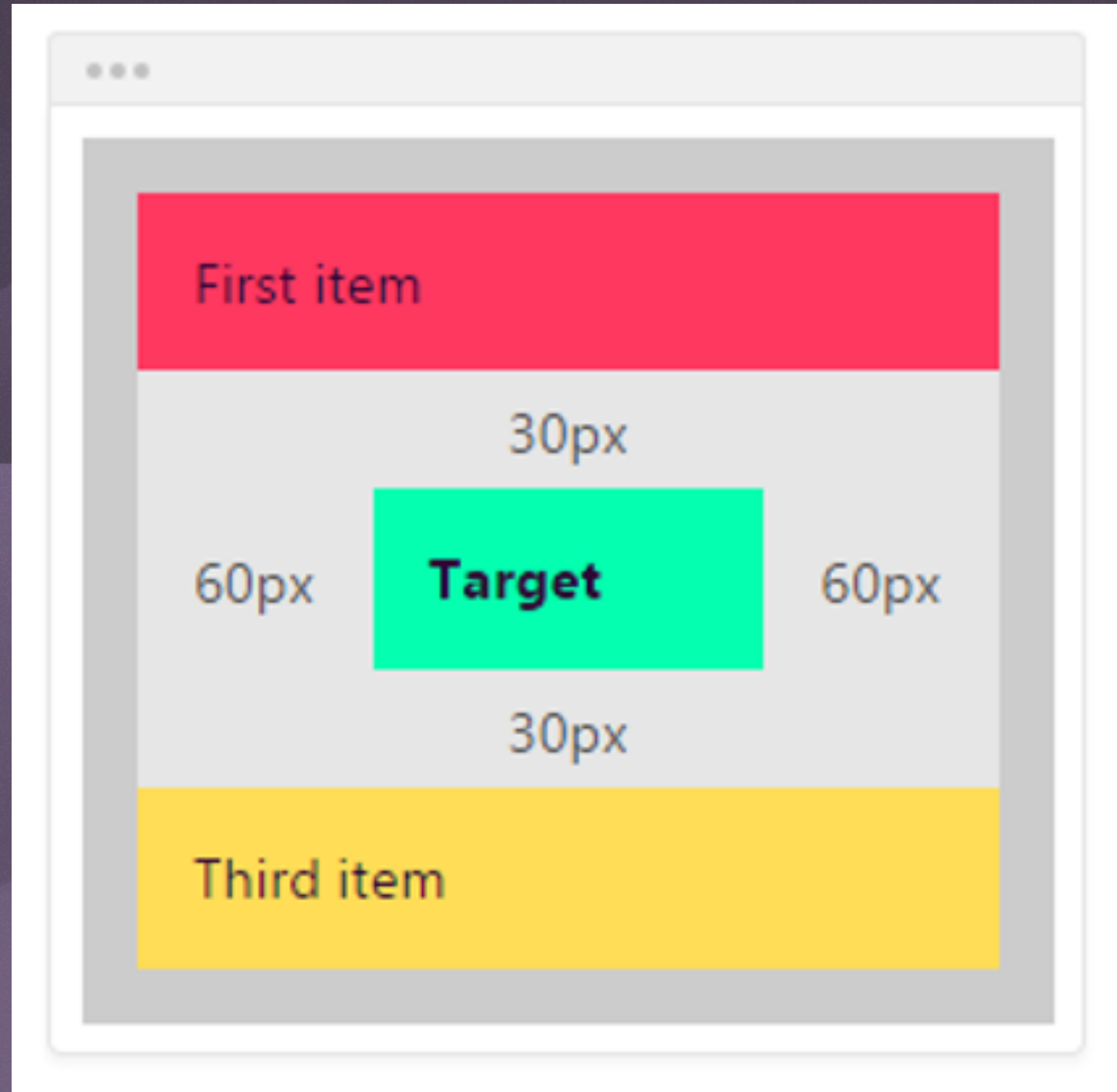
NUMBER OF CREDITS:

98





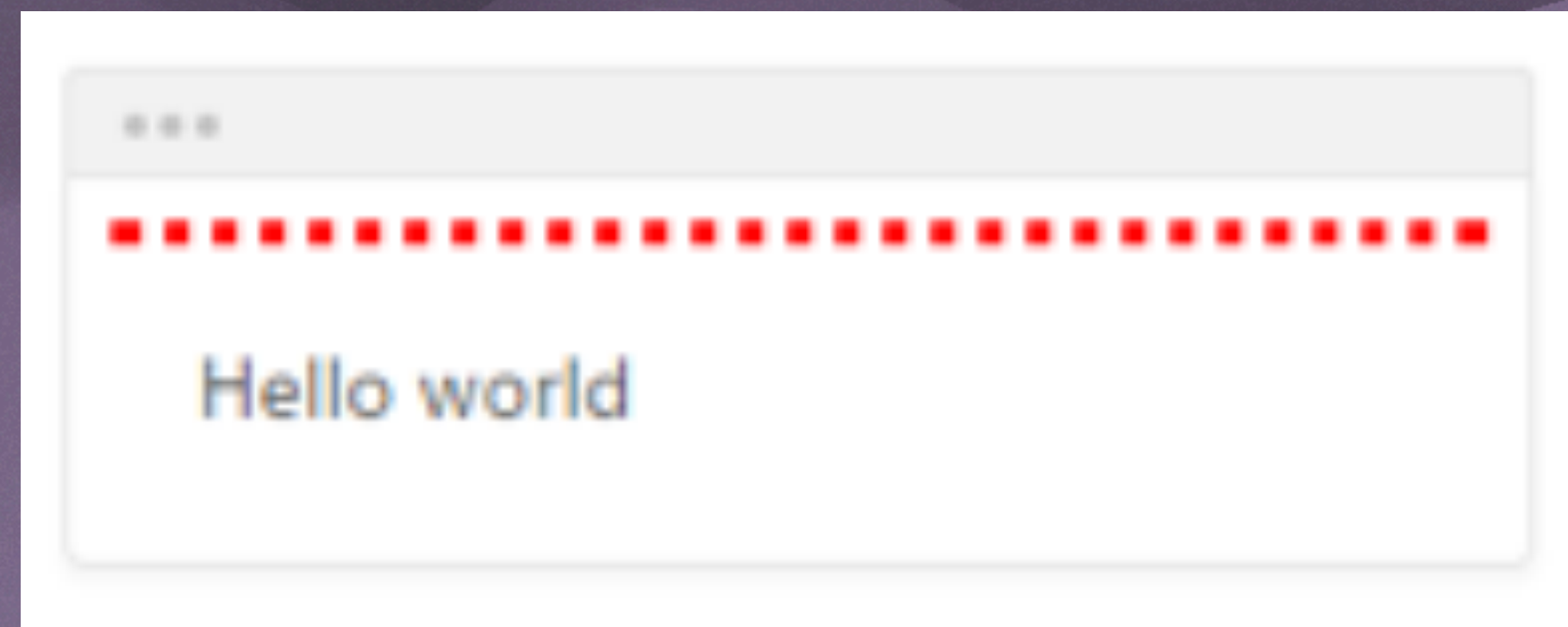
Space Around Objects



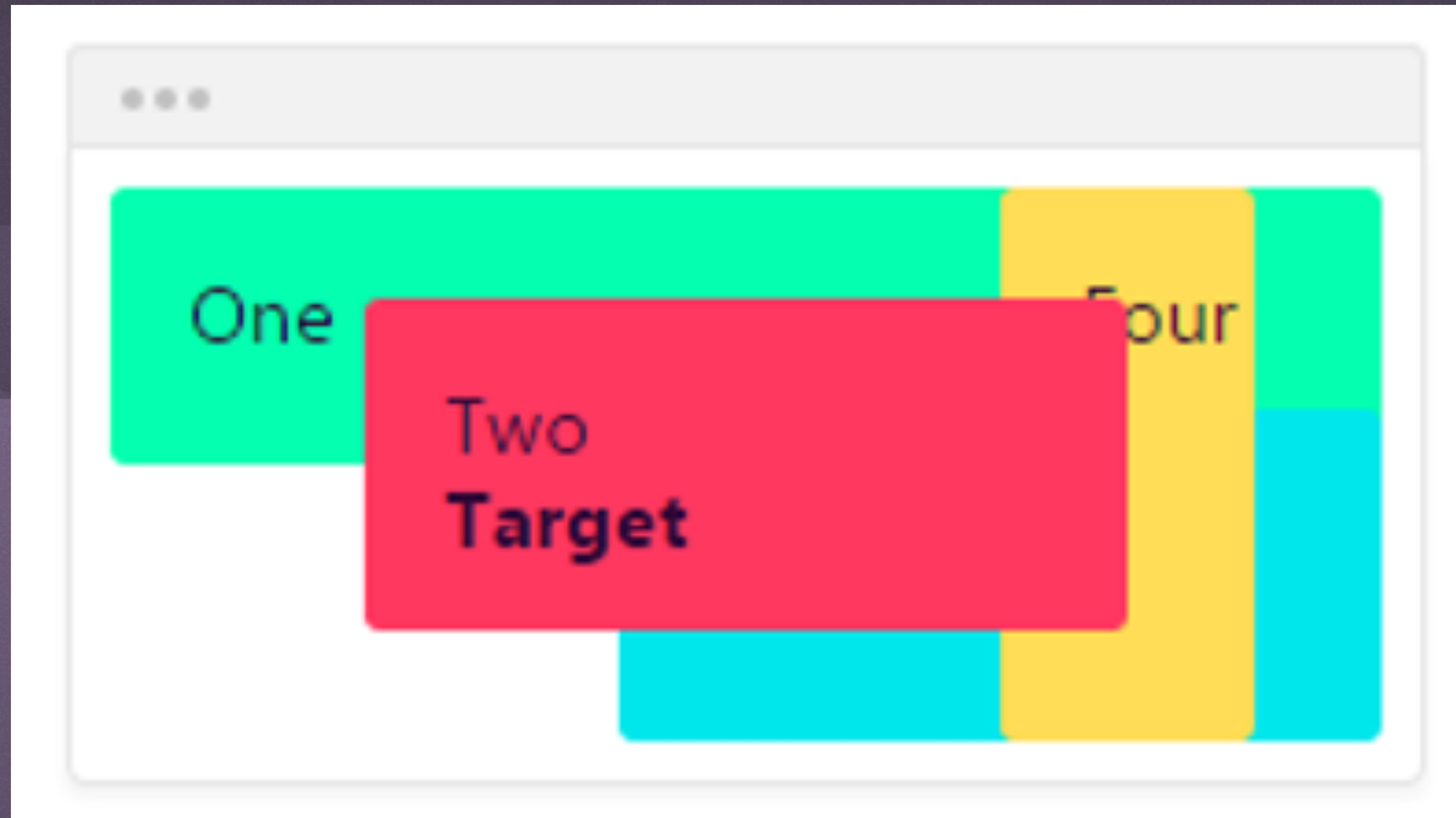
Borders

You can control:

- Color
- Thickness
- Style



Z-Index



Z-ordering can be tricky and un-reliable



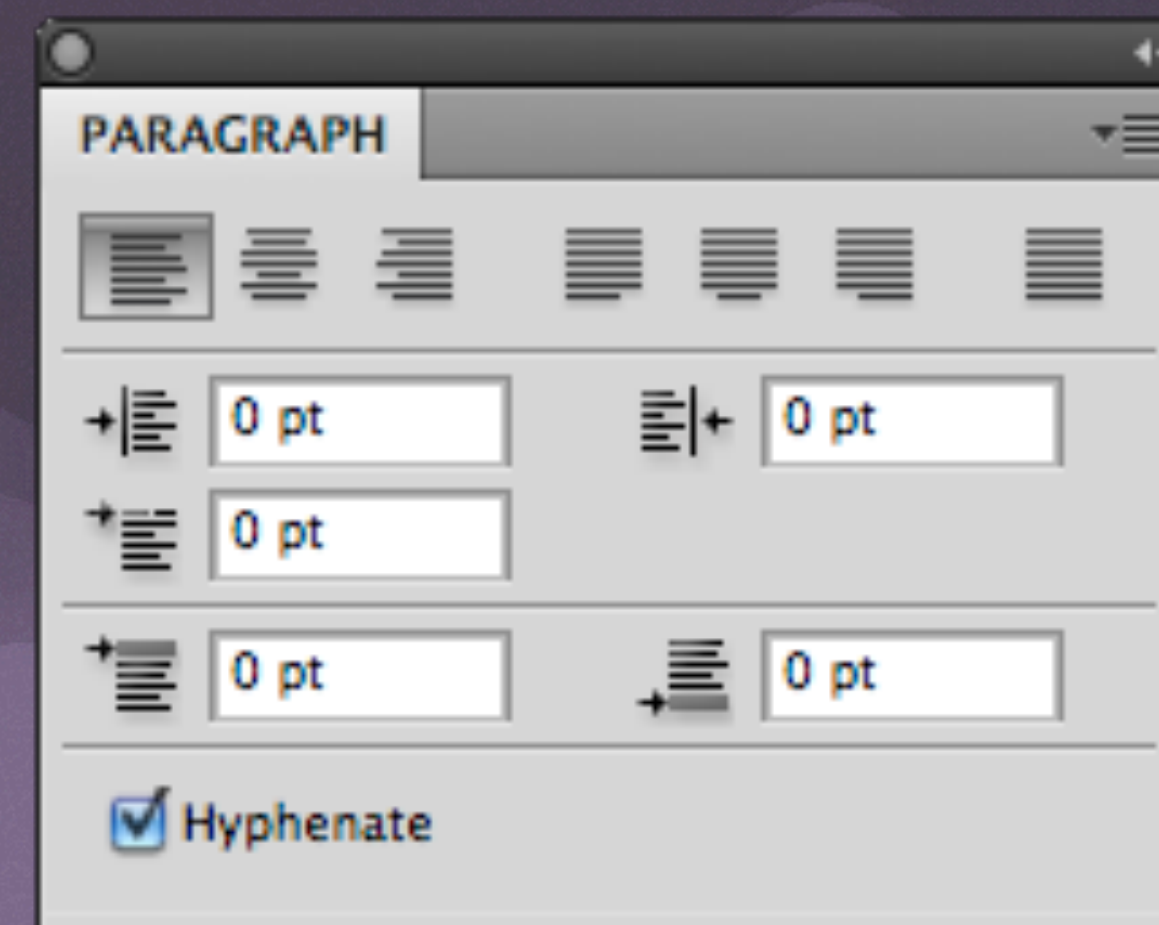
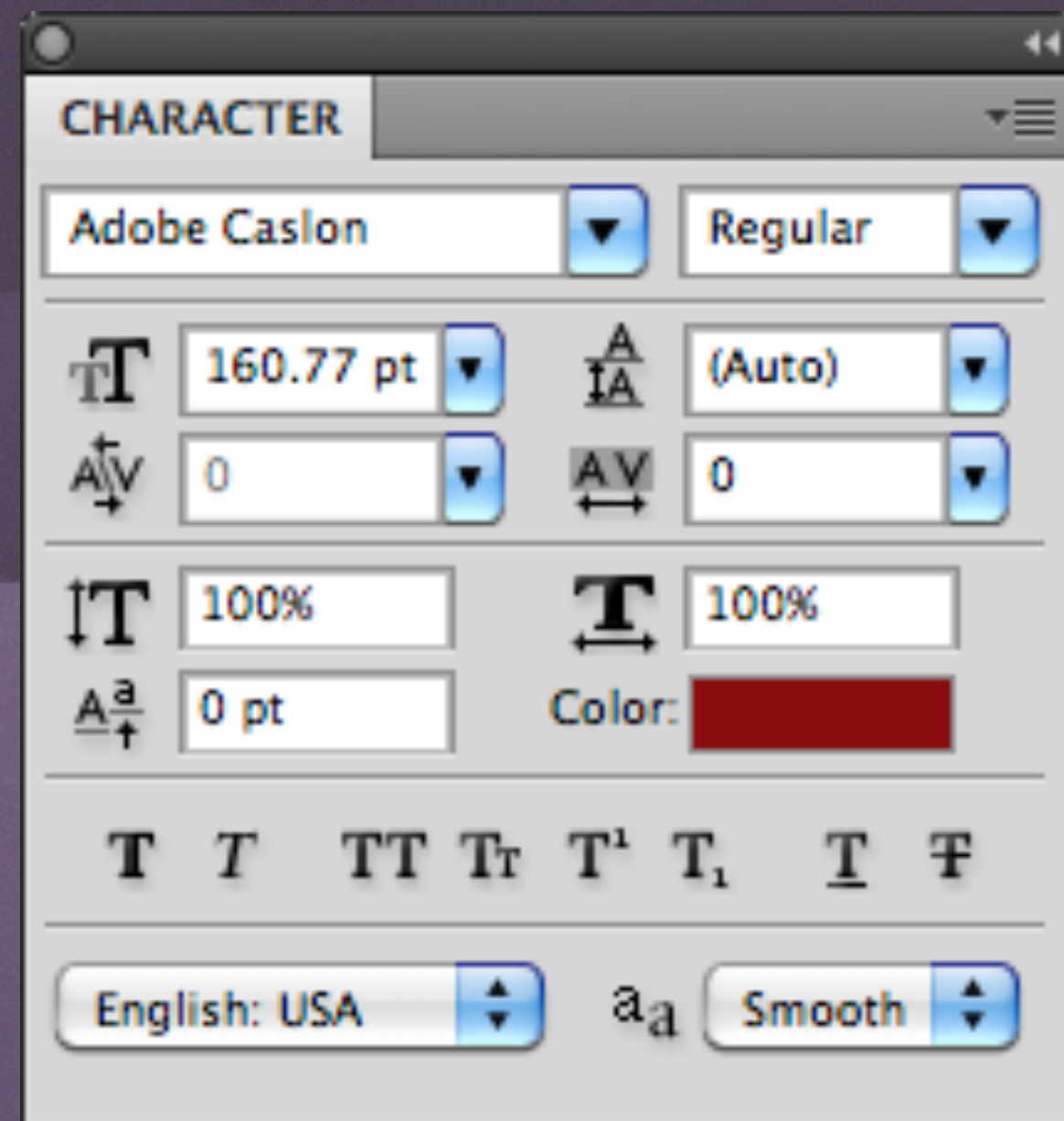
WEB PRESENTATION

Web Typography

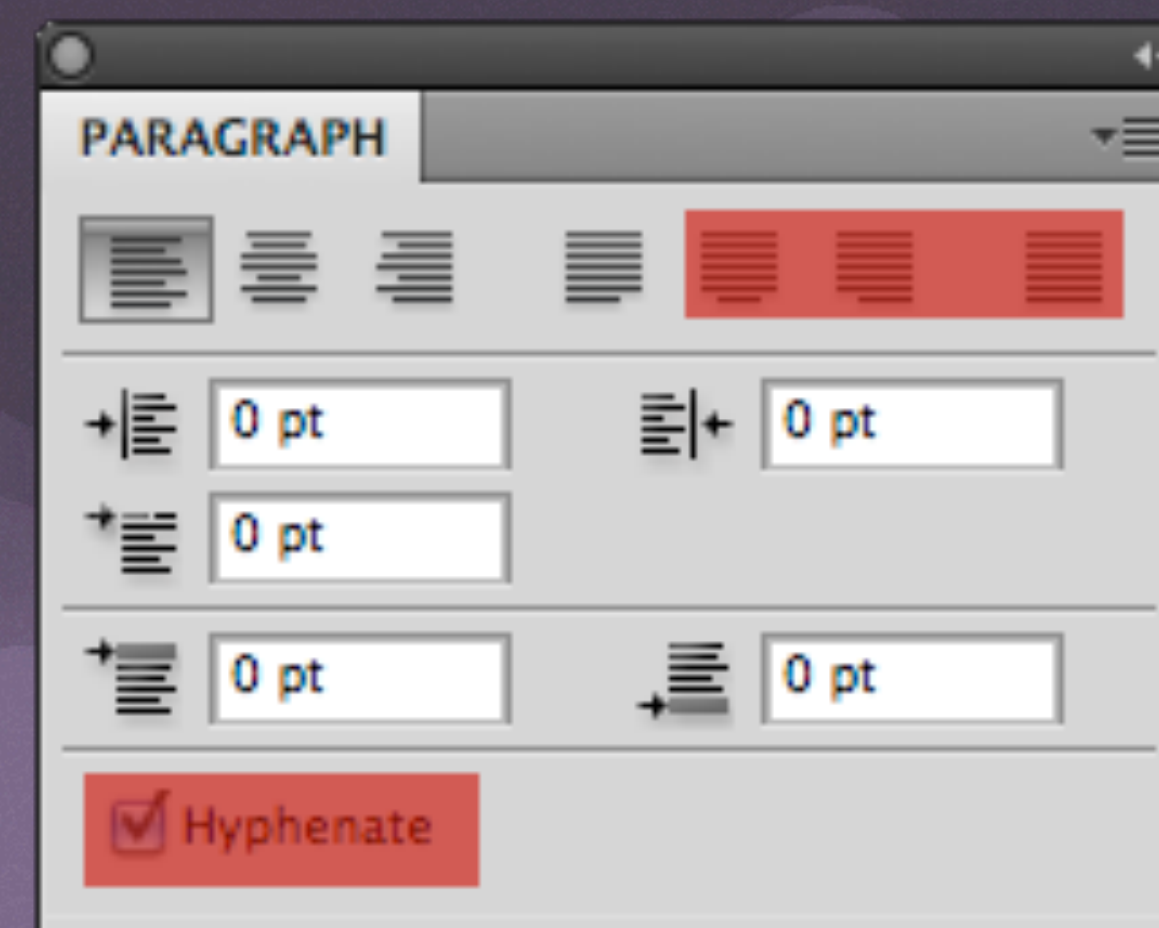
Things you can control

- Typeface & Type size
- Color (both foreground and background)
- Leading (line-height)
- Font weight & style
- Tracking (letter-spacing)
- Word spacing
- Character case (Uppercase, lowercase)
- Text shadow (blurred or not)
- Alignment

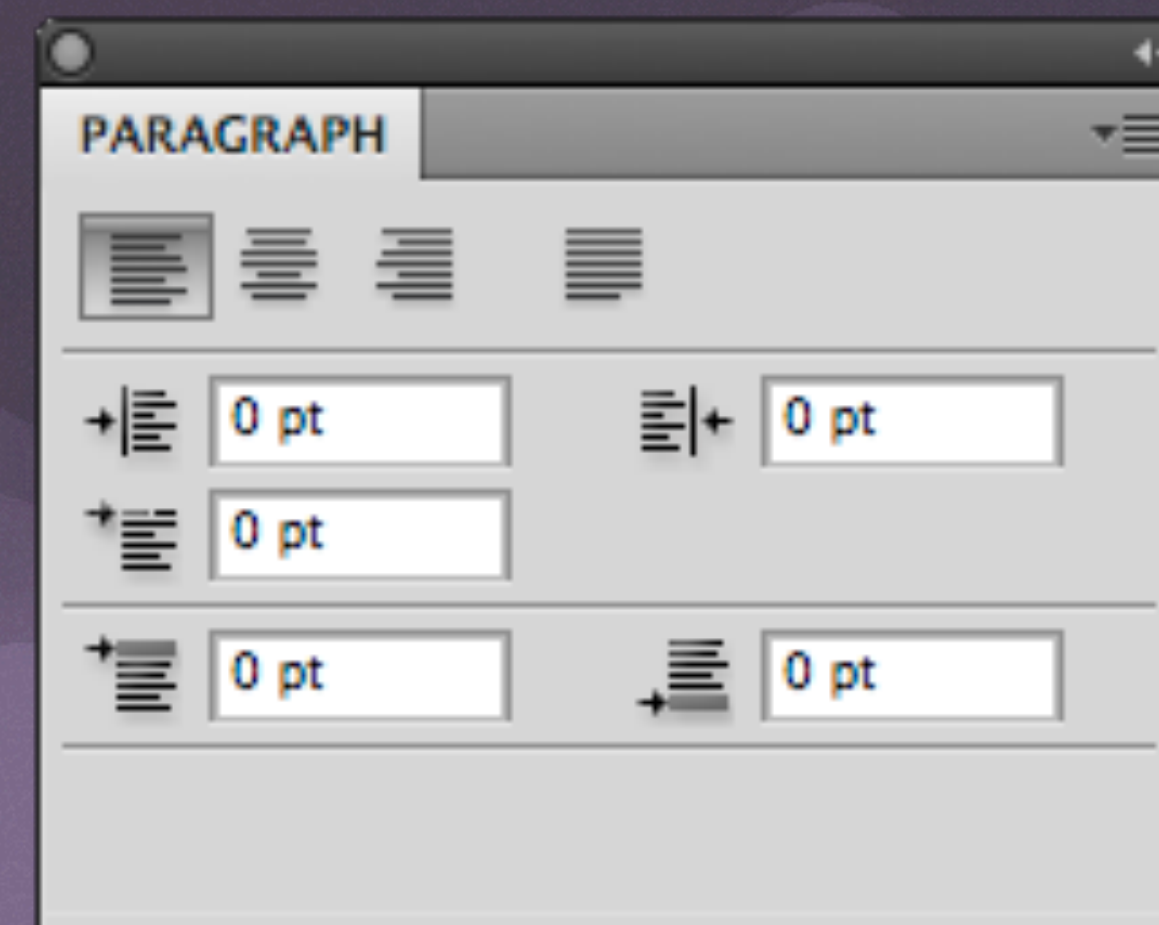
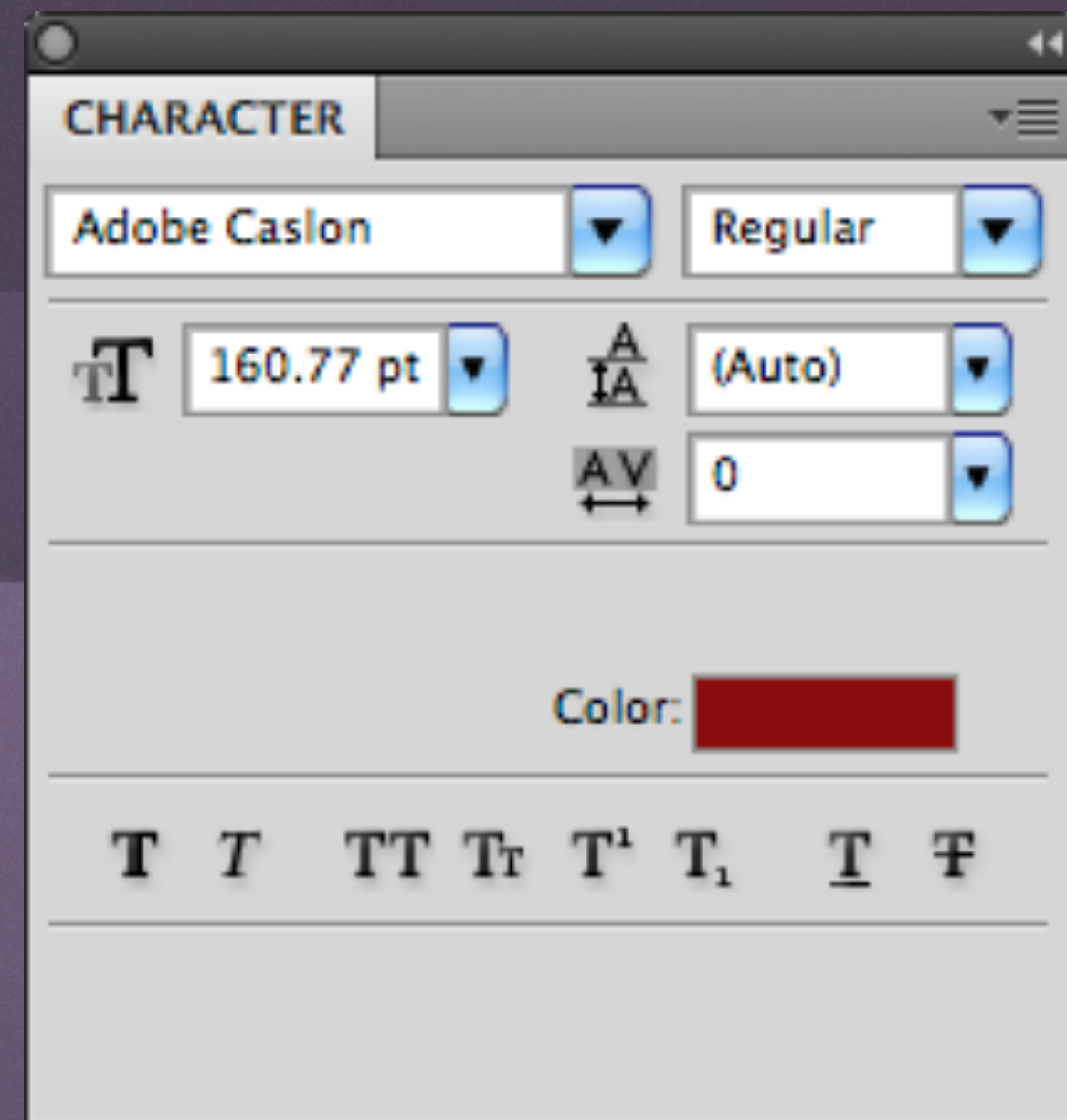
Photoshop Panels



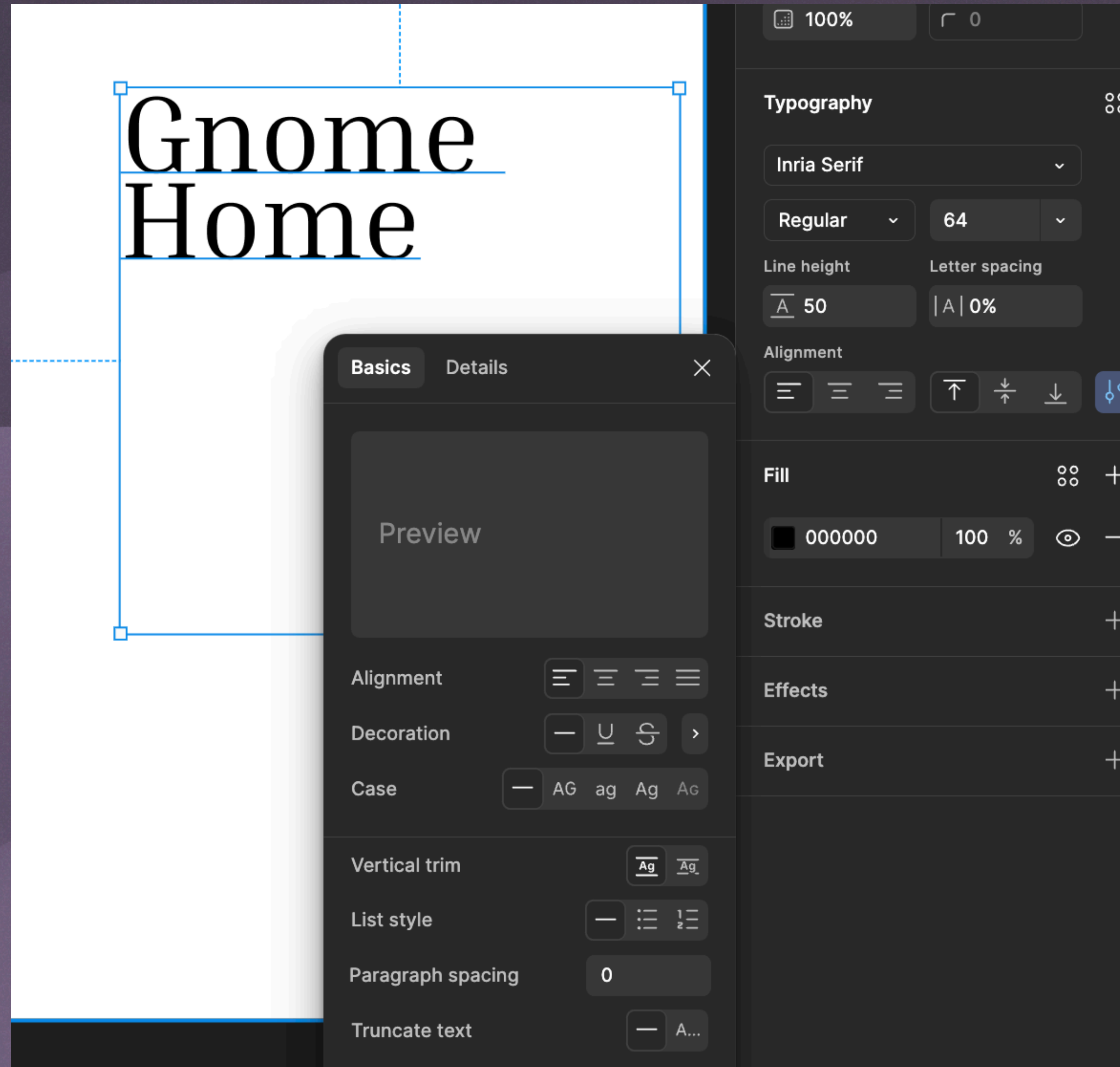
Photoshop Panels



Photoshop Panels



Figma Type Panels



WEB PRESENTATION

Select Presentation Options in Cascading Style Sheets

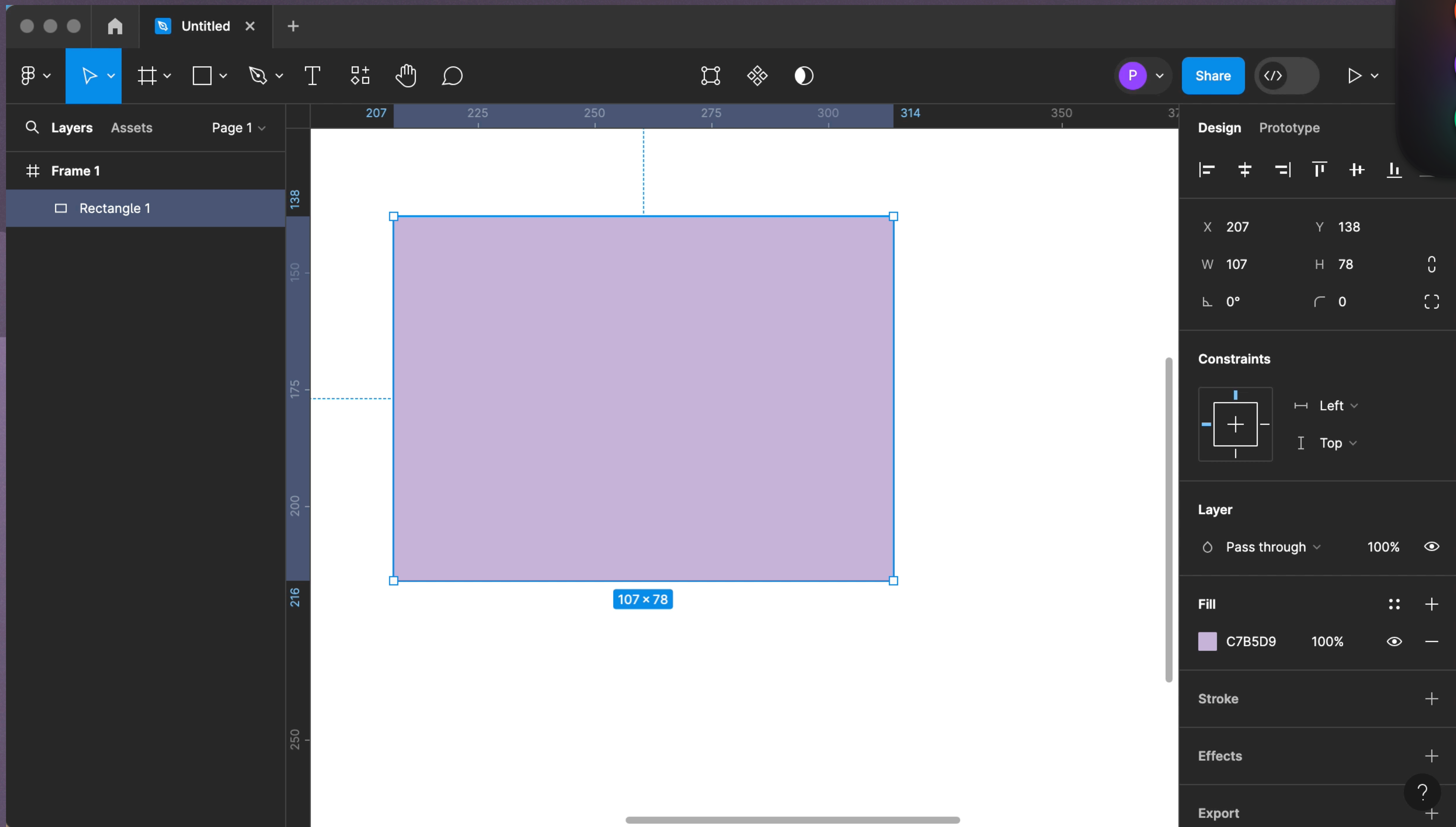
The Atom

Lorem ipsum dolor sit amet, consectetur adipiscing elit, sed do eiusmod tempor incididunt ut labore et dolore magna aliqua. Ut enim ad minim veniam, quis nostrud exercitation ullamco laboris nisi ut aliquip ex ea commodo consequat.

Duis aute irure dolor in reprehenderit in voluptate velit esse cillum dolore eu fugiat nulla pariatur. Excepteur sint occaecat cupidatat non proident, sunt in culpa qui officia deserunt mollit anim id est laborum Et harum und lookum like Greek to me, dereud facilis est er expedit.

`border-radius: 32px;`

Rounded Rectangle Borders





Box Shadow



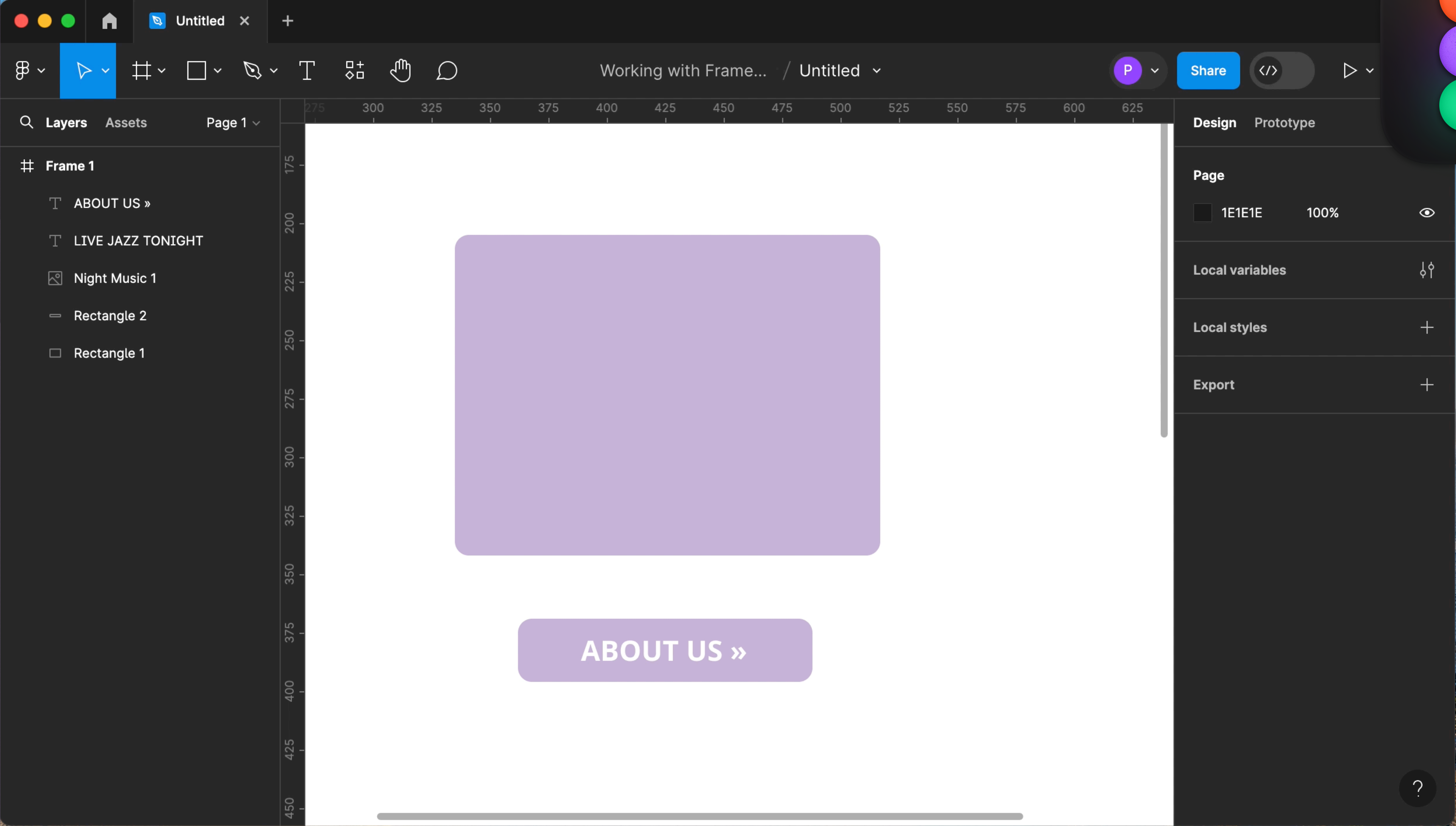
Google

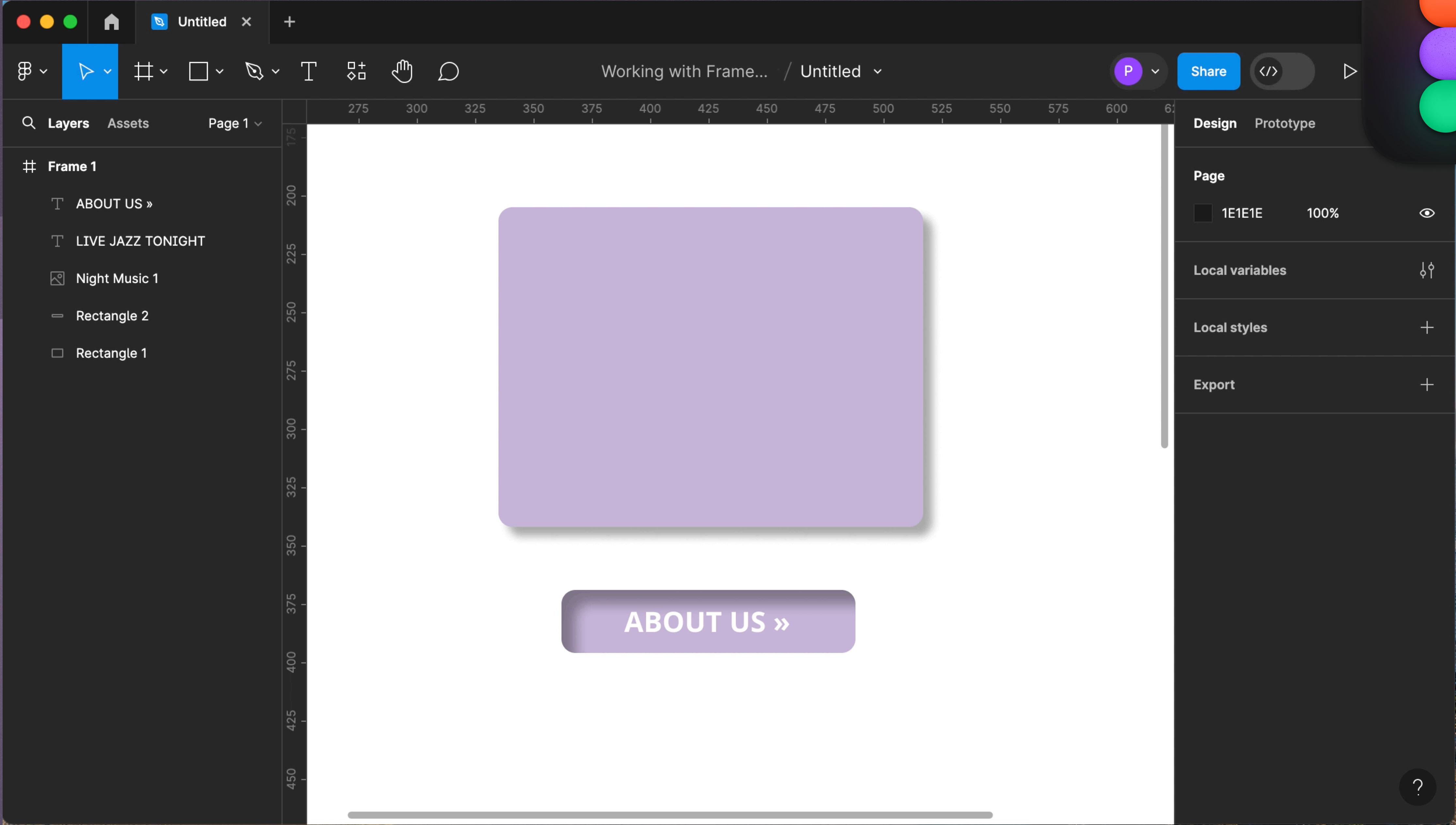


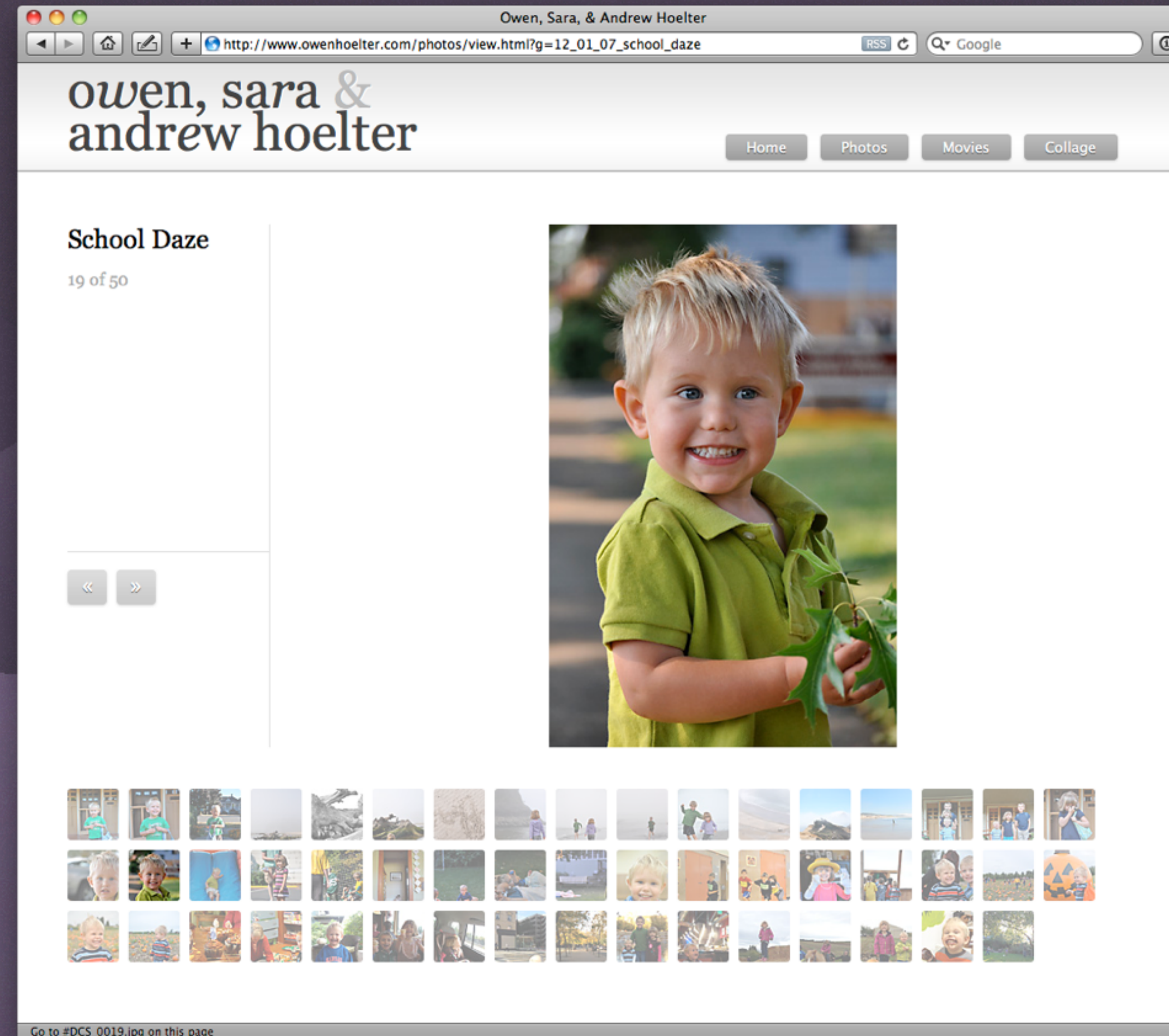
WEEKEND

OF

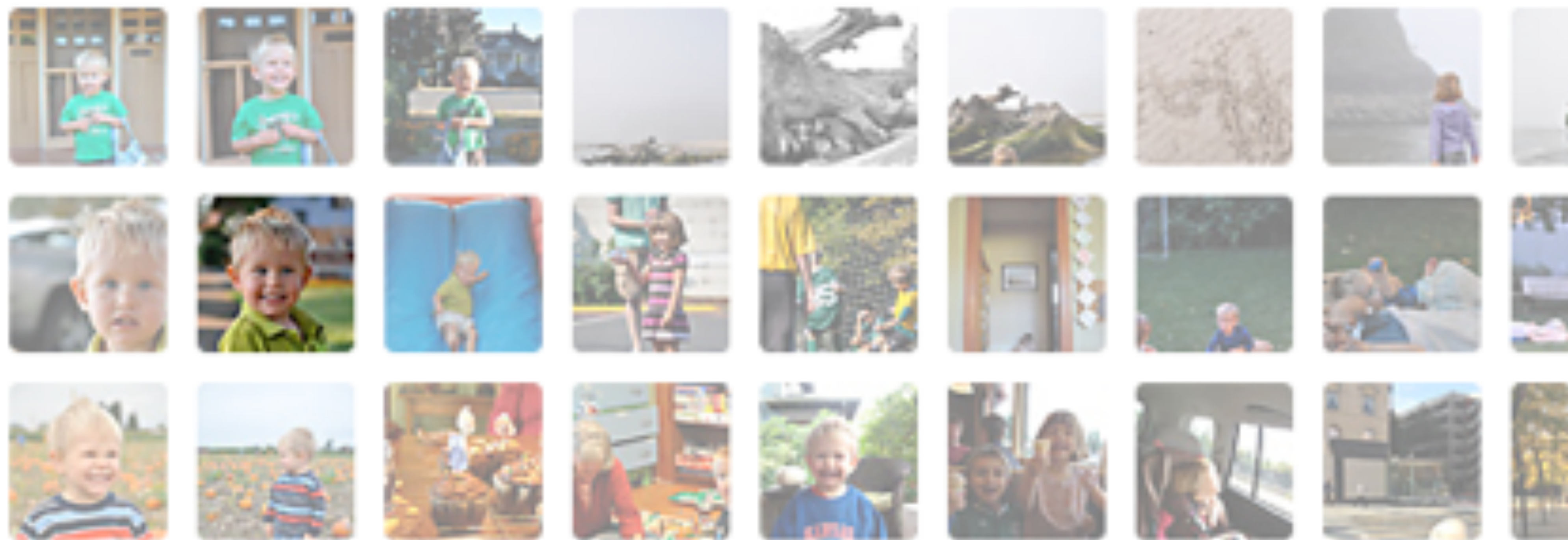
VIEW





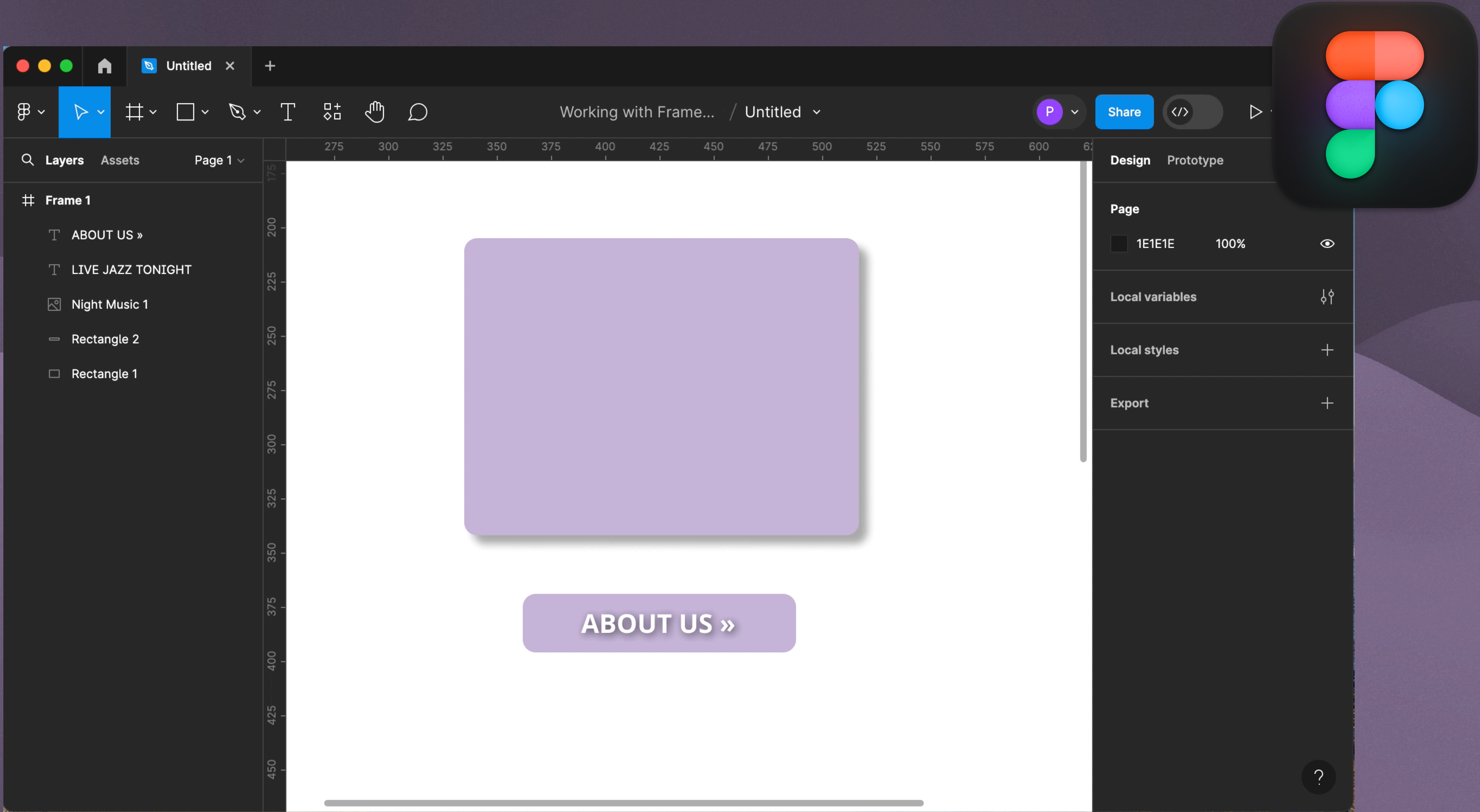


Opacity



Go to [#DCS_0019.jpg](#) on this page

Opacity

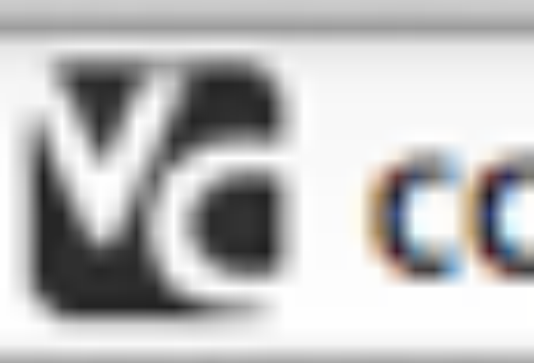
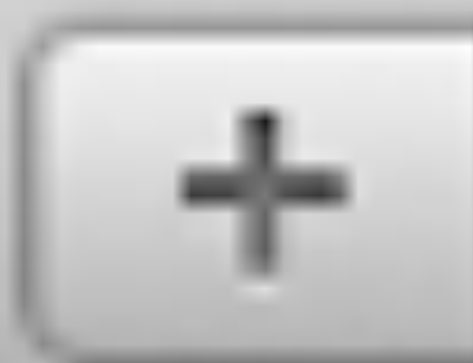




Gradients



Visual Community



Visual Co

GRAPHIC DESIGN • INTERACTIVE M

About VC

Classes

Student

Ultimate CSS Gradient Generator

Ultimate CSS Gradient Generator – ColorZilla.com

www.colorzilla.com/gradient-editor/


Reader

Ultimate CSS Gradient Generator


A powerful Photoshop-like CSS gradient editor from [ColorZilla](#).

For FirefoxFor ChromeGradient Generator

Presets



Name:




Stops

Opacity: <input type="text" value="100"/>	Location: <input type="text" value="0"/>	<input type="button" value="delete"/>
Color: <input type="text" value="#000000"/>	Location: <input type="text" value="100"/>	<input type="button" value="delete"/>

Adjustments

Sponsor




Together
Get it
Done

Manage Projects Better
Get your projects done faster, easier with Zoho Projects. 1 Project Free!

via Ad Packs

Preview



Orientation: Size: x ☐ IE

CSS

[switch to scss](#)

```
background: rgb(76,76,76);
background: -moz-linear-gradient(top,
  rgba(76,76,76,1) 0%, rgba(89,89,89,1) 12%,
  rgba(102,102,102,1) 25%, rgba(71,71,71,1) 39%,
  rgba(44,44,44,1) 50%, rgba(0,0,0,1) 51%,
  rgba(17,17,17,1) 60%, rgba(43,43,43,1) 76%,
  rgba(28,28,28,1) 91%, rgba(19,19,19,1) 100%);
background: -webkit-gradient(linear, left top, left
bottom, color-stop(0%,rgba(76,76,76,1)), color-
stop(12%,rgba(89,89,89,1)), color-
stop(25%,rgba(102,102,102,1)), color-
stop(39%,rgba(71,71,71,1)), color-
stop(50%,rgba(44,44,44,1)), color-
stop(51%,rgba(0,0,0,1)), color-
stop(60%,rgba(17,17,17,1)), color-
stop(76%,rgba(43,43,43,1)), color-
stop(91%,rgba(28,28,28,1)), color-
stop(100%,rgba(19,19,19,1)));
background: -webkit-linear-gradient(top,
  rgba(76,76,76,1) 0%,rgba(89,89,89,1)
12%,rgba(102,102,102,1) 25%,rgba(71,71,71,1)
39%,rgba(44,44,44,1) 50%,rgba(0,0,0,1)
51%,rgba(17,17,17,1) 60%,rgba(43,43,43,1)
76%,rgba(28,28,28,1) 91%,rgba(19,19,19,1) 100%);
background: -o-linear-gradient(top, rgba(76,76,76,1)
0%,rgba(89,89,89,1) 12%,rgba(102,102,102,1)
25%,rgba(71,71,71,1) 39%,rgba(44,44,44,1)
```

Color format: ☐ Comments ☐ IE9 Support (?)

Permalink

Link to, save or share the current gradient using its [unique link](#).



Location: %

Location: %

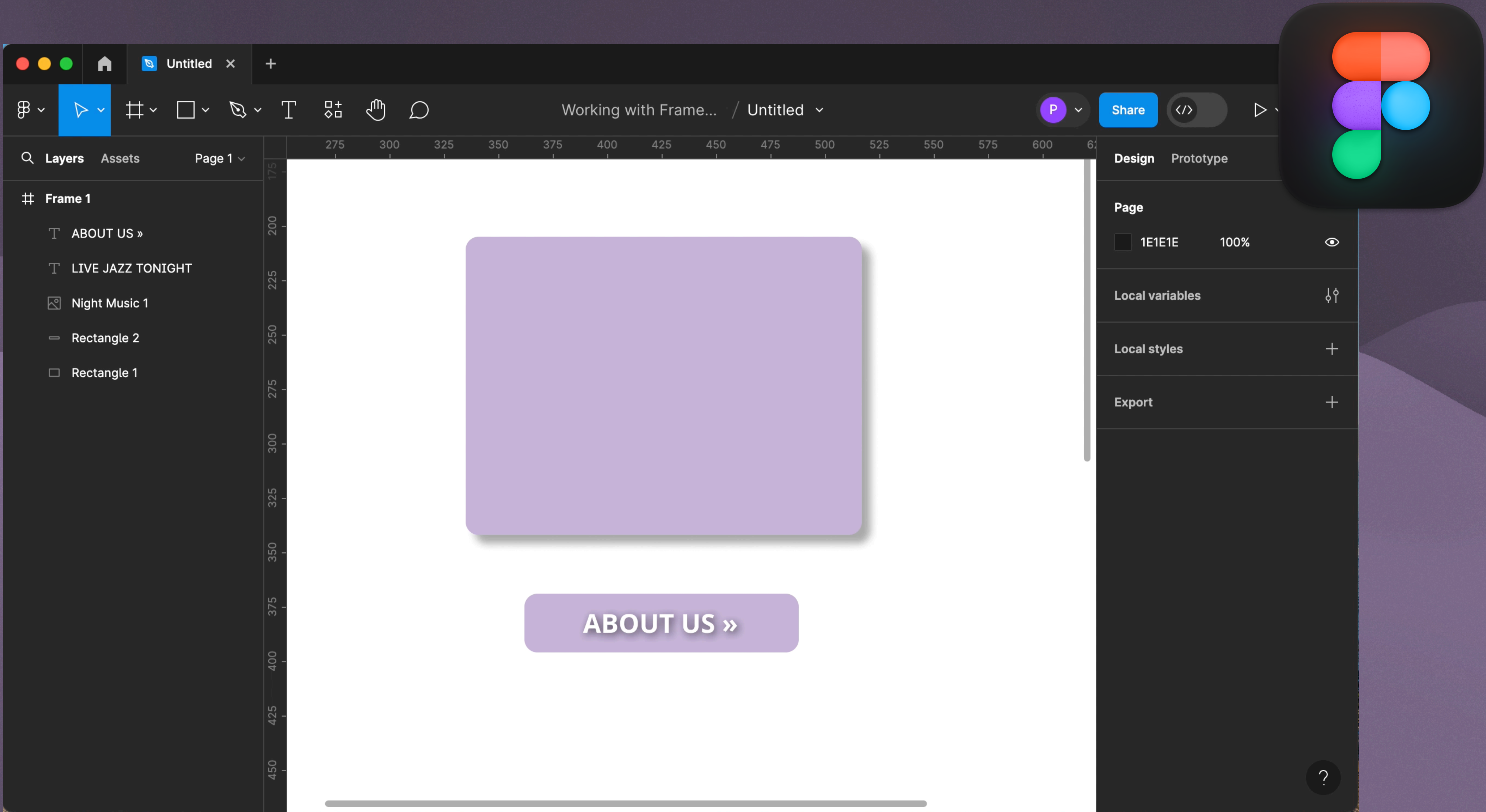
Manage Projects Better
Get your projects done faster, easier with Zoho Projects. 1 Project Free!

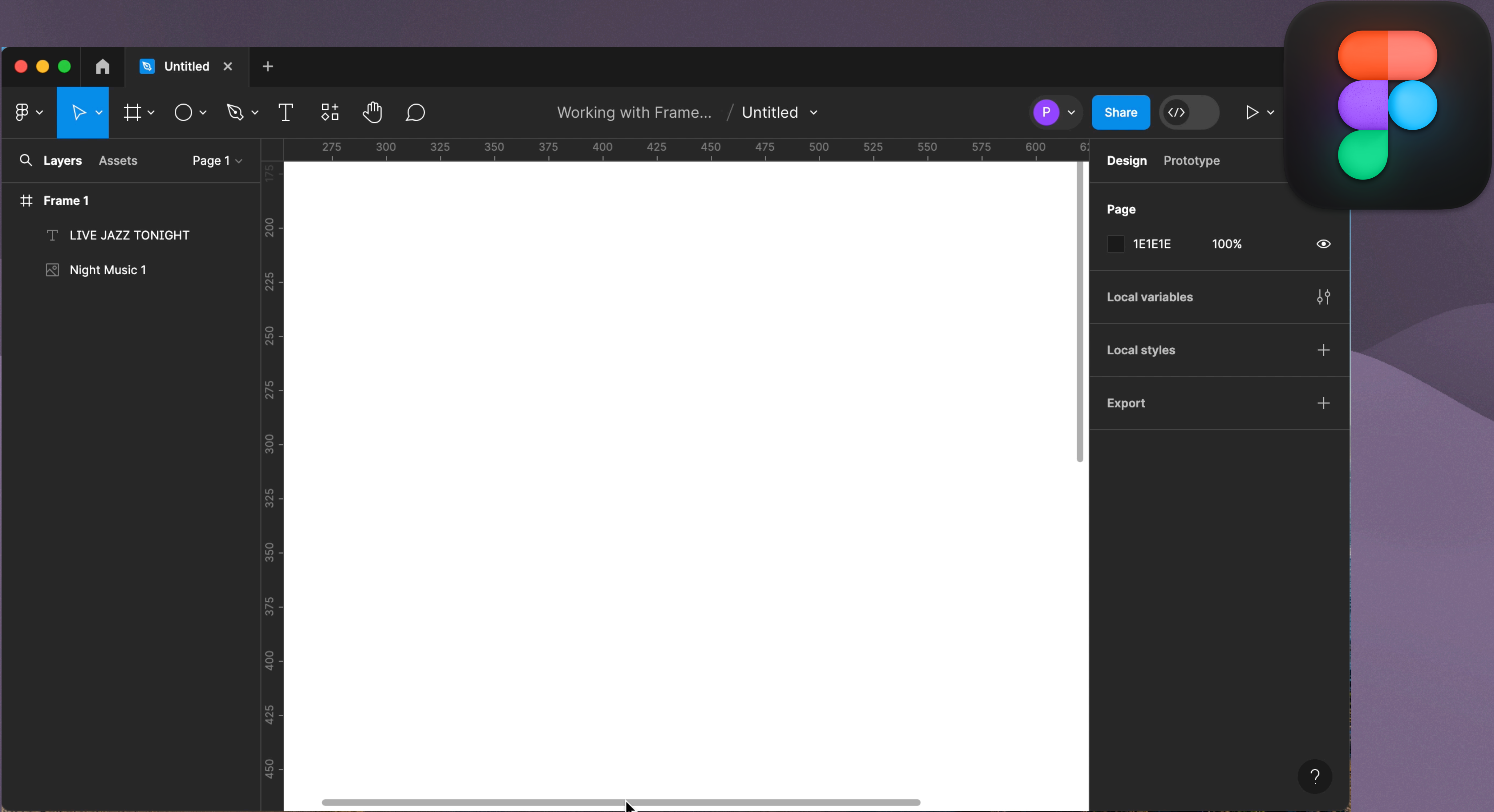
Orientation: Size: X ☐ IE

CSS [switch to scss](#)

```
background: rgb(76,76,76);
background: -moz-linear-gradient(top,
  rgba(76,76,76,1) 0%, rgba(89,89,89,1) 12%,
  rgba(102,102,102,1) 25%, rgba(71,71,71,1) 39%,
  rgba(44,44,44,1) 50%, rgba(0,0,0,1) 51%,
  rgba(17,17,17,1) 60%, rgba(43,43,43,1) 76%,
  rgba(28,28,28,1) 91%, rgba(19,19,19,1) 100%);
background: -webkit-gradient(linear, left top, left
bottom, color-stop(0%,rgba(76,76,76,1)), color-
stop(12%,rgba(89,89,89,1)), color-
stop(25%,rgba(102,102,102,1)), color-
stop(39%,rgba(71,71,71,1)), color-
stop(50%,rgba(44,44,44,1)), color-
stop(51%,rgba(0,0,0,1)), color-
stop(60%,rgba(17,17,17,1)), color-
stop(76%,rgba(43,43,43,1)), color-
stop(91%,rgba(28,28,28,1)), color-
stop(100%,rgba(19,19,19,1)));
background: -webkit-linear-gradient(top,
  rgba(76,76,76,1) 0%,rgba(89,89,89,1)
12%,rgba(102,102,102,1) 25%,rgba(71,71,71,1)
39%,rgba(44,44,44,1) 50%,rgba(0,0,0,1)
51%,rgba(17,17,17,1) 60%,rgba(43,43,43,1)
76%,rgba(28,28,28,1) 91%,rgba(19,19,19,1) 100%);
background: -o-linear-gradient(top, rgba(76,76,76,1)
0%,rgba(89,89,89,1) 12%,rgba(102,102,102,1)
25%,rgba(71,71,71,1) 39%,rgba(44,44,44,1)
```

Color format: ☐ Comments ☐ IE9 Support (?)







WEB PRESENTATION Interactivity

Websites *respond* to
user action

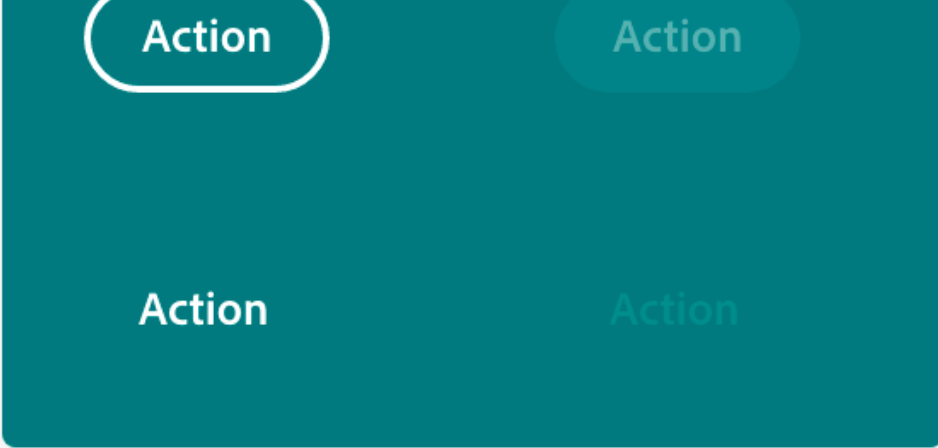












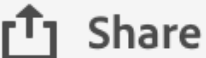











Interactivity & Animations

- :hover changes (mouse)
- :active changes (touch)
- Transitions
- Animations



Interactivity & Animations

Button v5.3.0

	Default	Disabled		
			OVER BACKGROUND	
			OVER BACKGROUND (QUIET)	
CALL TO ACTION				
PRIMARY			CALL TO ACTION (ICON)	 
PRIMARY (QUIET)			PRIMARY (ICON)	 
SECONDARY			PRIMARY (QUIET ICON)	 
SECONDARY (QUIET)			SECONDARY (ICON)	 
NEGATIVE			SECONDARY (QUIET ICON)	 
NEGATIVE (QUIET)			NEGATIVE (ICON)	