

Perpendicular Angel Design

Organizing and simplifying, one illumination at a time

An Event Apart Seattle 2017: Let's Build a Website (and Talk About The Job of Front-End Design and Development) by Chris Coyier

Posted on [April 8, 2017](#)

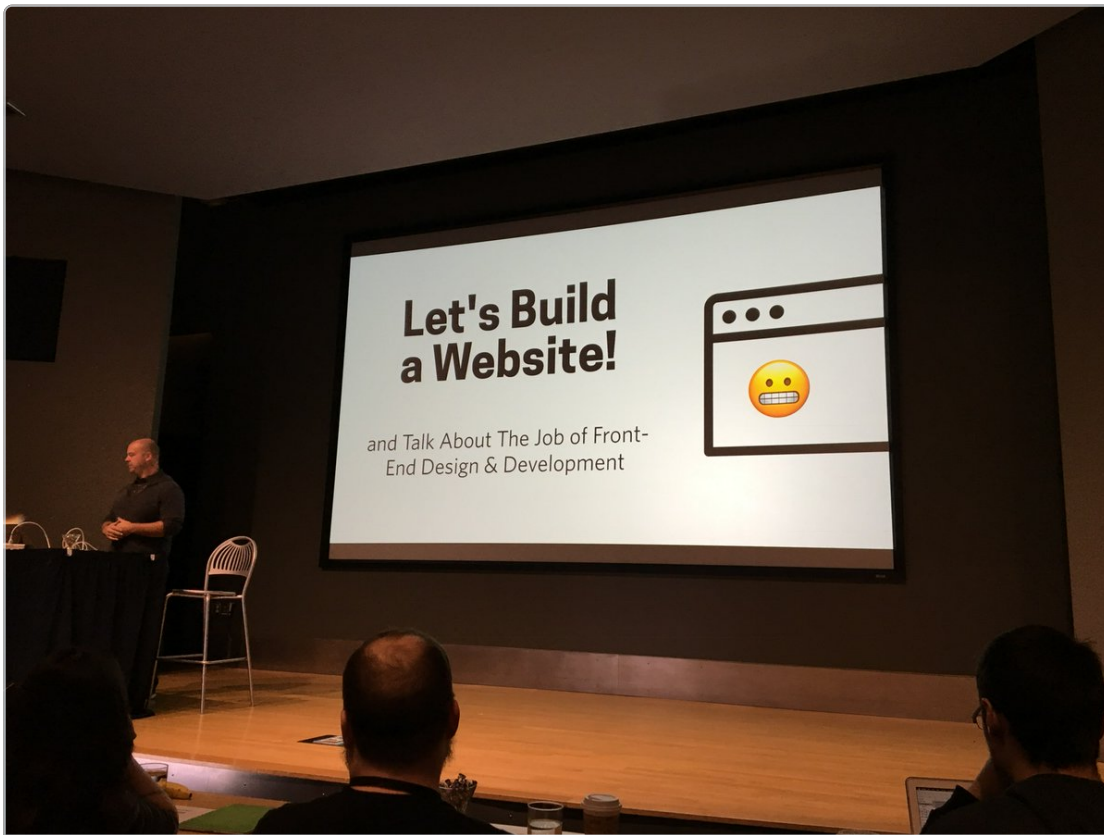
The last session of the conference was what Chris referred to as an “all-day session”. Chris spoke extensively on multiple topics throughout the day, all of which centered around the idea that writing a website today has a lot of complexity.

Truth be told, most of us in the audience know perfectly well how to build a website, at least to the point that we can build something and get it into publication. Some days it seems like everyone and a whole bunch of things (looking at you, frameworks) believe they know how to build a website.

But best practices are harder to identify and codify, especially with the industry moving on so many topics in so many directions at once. The result: this session was a fantastic use of my time, even having been in the industry for over 20 years.

It's worth noting that the session was very geared toward front-end development and developers. This was not the session where you were going to learn how to design a website or how to brand or even at the other end how to test. In that sense, it was the most focused session of the conference.

Since it was an all-day session, and since Chris spent a significant amount of that time actively coding, I did my best to capture the highest concepts and did not get every detail. If you'd like every detail, Chris is teaching another session in [Chicago in August](#).



Anne Gibson

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Today is @chriscoyier's workshop, "Let's Build a Website!"
#aeasea

12:04 PM - 5 Apr 2017



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Arting
+ Nerding
+ Businessing

Front end design and development #AEASEA

12:06 PM - 5 Apr 2017

2

1



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The work is creative! youtube.com/watch?v=1x-x7H...#AEASEA

12:08 PM - 5 Apr 2017



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Examples for today's work is a gym website [#AEASEA](#)

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(which seemed like something I'd need to tell you when referencing later, but really it wasn't.)



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.@chriscoyier recommends sketchapp.com as a great tool for Mac users. Costs \$100. [#AEASEA](#)

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Another app is Figma - which is a website - that gets compared to Sketch a lot. Allows multiple people to real-time design at once [#AEASEA](#)

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UXPin is another web-based design tool. [#AEASEA](#)

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Invision is a good tool for collaborating designs that were built in other apps [#AEASEA](#)

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Adobe Experience Design is Adobe's competition for Sketch. [#AEASEA](#)

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The market is still figuring itself out

Responsive design

Collaboration

Interactivity

Native/Web

Trends [#AEASEA](#)

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(Sometimes I feel like the only weirdo doing all her wireframes in Omnigraffle, but I'm fast at it so I'm sticking to it.)



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It doesn't hurt to not be opinionated about these things [#AEASEA](#)

12:23 PM - 5 Apr 2017

Chris used a good number of these different apps, and different apps for different projects. That's a great approach because it means you stay fresh with what's in the market and at the same time don't get locked in to only way to think about designs and deliverables.



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- Design with design software
- Design in the browser
- Sketch on paper
- Design in my brain as I sleep
- All of the above [#AEASEA](#)

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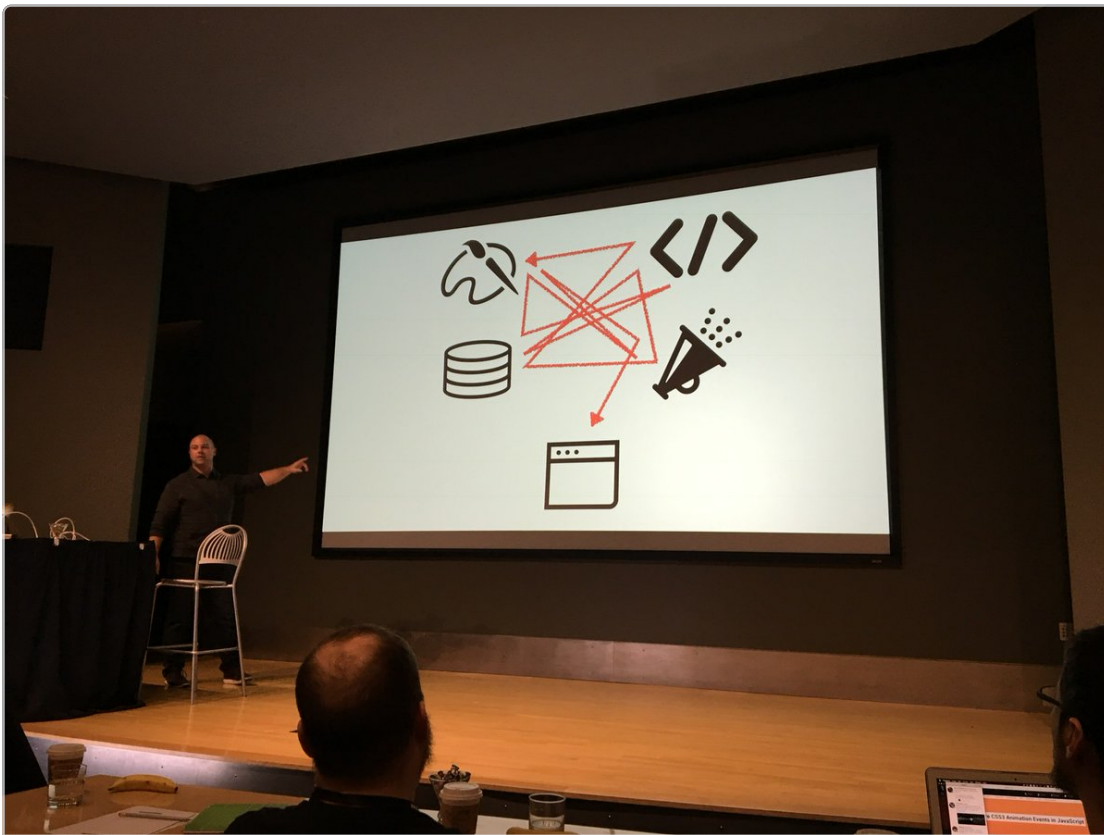


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Waterfall is too clean to be real. It only looks good on paper. If the design isn't iterating, there's a problem. [#AEASEA](#)

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This is what design actually looks like [#aeasea](#)

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1 2

(even that looks kind of clean to me.) (Last year was rough.)



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The healthiest projects will involve plenty of back-and-forth between designers and developers (if they're different people) [#AEASEA](#)

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Sketch provides a color palette that lists the document colors
[#AEASEA](#)

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Sketch also provides the ability to use some type styles and
symbols as reusable chunks [#AEASEA](#)

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Start with HTML, not just because we're in a workshop, but
because the ultimate launch ends in HTML [#AEASEA](#)

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Write our best possible semantics and accessible markup in the
HTML prototype. A good part of [#A11y](#) work happens in HTML
[#AEASEA](#)

12:34 PM - 5 Apr 2017



Den McHenry

@DenMcH

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Chris Coyier just shouted out this article by [@TreblesandBlues](#) in [@freeCodeCamp](#)'s medium publication at [#aeasea](#)
medium.freecodecamp.com/how-making-hun...

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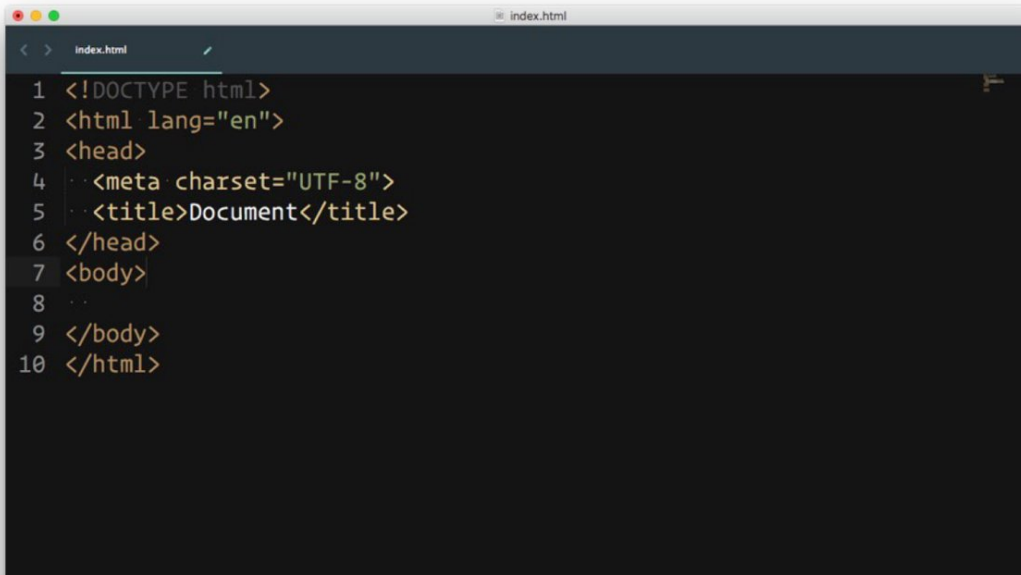
How making hundreds of hip hop beats helped me understand H...

It was 2 AM on a Saturday night, and I was up late working on a new project.

medium.freecodecamp.com

1

2

A screenshot of a code editor window titled 'index.html'. The editor shows a basic HTML5 boilerplate structure with line numbers 1 through 10. The code is as follows:

```
1 <!DOCTYPE html>
2 <html lang="en">
3 <head>
4   <meta charset="UTF-8">
5   <title>Document</title>
6 </head>
7 <body>
8   ...
9 </body>
10 </html>
```



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This is your baseline [#AEASEA](#)

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HTML5 Boilerplate brings in a lot of assumptions about what you're doing and how you're doing it. [#AEASEA](#)

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Emmet - emmet.io free and open source - gives a bunch of expansions for HTML etc. [#AEASEA](#)

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Emmet plugs into a bunch of different apps (which since I use diff apps at work and home would be really handy) [#AEASEA](#)

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Should the logo be in an H1?
Generally: probably not. (Whoops.) But on the homepage it probably makes sense [#AEASEA](#)

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Use section tags for different sections of the page [#AEASEA](#)

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When do you use <section>? Ummm... for major thematic chunks of a page. It's indicative of a chunk of the page #AEASEA

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If everyone did <section> the same way the spec will evolve to meet us #AEASEA

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Josh Vickerson

@joshvickerson

Follow

"Specs are pavement" - @chriscoyier #aeasea

Don't worry about the context. It made sense, I promise.

12:44 PM - 5 Apr 2017 · Belltown, Seattle

1

Specs happen when we pave the cowpaths – we codify what the developers are already doing.



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<div> is intentionally meaningless, it's for styling only. If your chunk has meaning use a tag. #AEASEA

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When you're mocking stuff up because IDs can't start with a number so the link won't work [#AEASEA](#)

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Obviously you want to go fix all those links later [#AEASEA](#)

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"Naming is hard, so we'll just call it 'thing'" - when doing mock ups don't fuss over your names. "Call it something." [#AEASEA](#)

12:48 PM - 5 Apr 2017



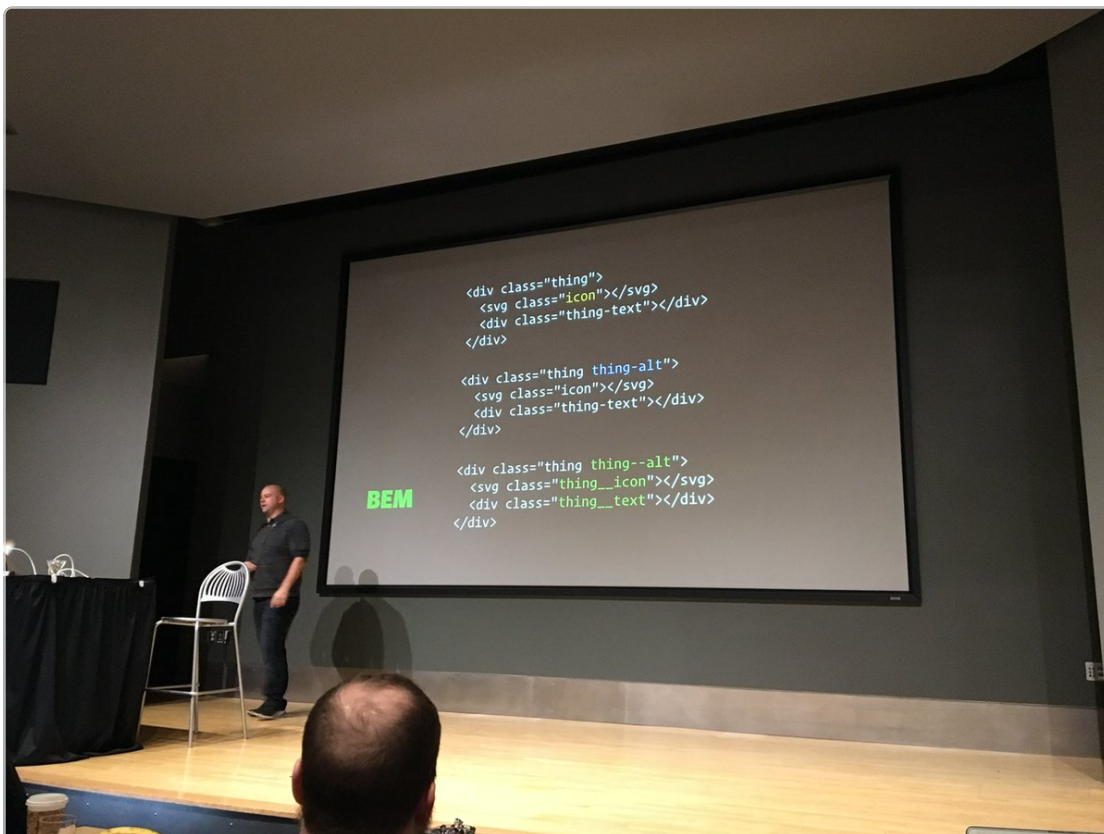
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Rigid naming conventions might be necessary for much larger teams, but this has worked for [@chriscoyier](#) on small and medium teams [#AEASEA](#)

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Name spacing in prototypes [#aeasea](#)

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“Just use a lot of classes. When in doubt, give it a class.” [#aeasea](#)

“TL;DR” name things smart.“

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As an Information Architect, I approve of this message.



Jen Simmons

@jensimmons

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News from the back room at AEA Seattle: the job title “webmaster” is making a comeback. As are named CSS colors / 216 clr palette. [#aeasea](#)

12:52 PM - 5 Apr 2017

3 19



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Yank stuff back to the left. Get your selectors as flat as possible. Don't get too specific. [#AEASEA](#)

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When your selectors are so specific that the CSS rule is so specific it's as long as this line of text, you're making your life hard. (Looking at you, Sharepoint. *growl*)



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CSS files tend to only ever grow. “The CSS file is append only.” “No idea what'll happen if I delete.” [#AEASEA](#)

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jared bishop

@bishopart

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Do things break because they are broken? Or do they break because they are being used in way they weren't intended? [#AEASEA](#) [@chriscoyier](#)

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Atomic CSS builds minimal CSS files from what actually gets used on pages [#AEASEA](#)

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Tachyons.io already has a bunch of classes in its library. 82k of CSS and you only use it. [#AEASEA](#)

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Some people are very productive in the Tachyons world. (I think it would break my brain.) [#AEASEA](#)

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If 3/4 headers are formatted one way and the 4th is different, it's worth a conversation on why there's an alternate [#AEASEA](#)

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This was aimed at discussing things with your designers. Sometimes they'll hand over a comp where it looks like the difference between the standard component and an alternate is arbitrary. It might be arbitrary, or it might be intentional. It's worth the conversation to understand the arbitrary from the unintentional – one fewer thing to test and code.



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There's an <address> tag - remember to use it! #AEASEA

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HTML5 semantics, [Microformats.org](http://microformats.org), and schema.org all have different recommendations for formatting an address #AEASEA

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Every choice you make in HTML is rabbit-hole worthy #AEASEA
"This is what robots want. Is it good for you too?"

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Phone numbers... can do nothing, use href="tel:" format, or both and display:none #AEASEA No good solution yet

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At a minimum, make sure phone number text is selectable so someone can copy it [#AEASEA](#)

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Side note: emojis can be totally work in code but databases or CMS might blow up. You can make class names emojis [#AEASEA](#)

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[Foundation.zurb.com](#) has a full CSS file that will immediately style a bunch of your classes depending on how you named them [#AEASEA](#)

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Because we used foundation, it automatically handles grids and stuff... good HTML and foundation can get pretty far fast [#AEASEA](#)

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Performance: there's a python command on the Mac to spin up a local web server [#AEASEA](#)

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At this point we've got a baseline of about 241k + about 12k on top of that for Foundation's CSS. Start baselining performance early [#AEASEA](#)

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Speedcurve and Calibre and other tools will watch performance all the time [#AEASEA](#)

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Note that we're this far into the session and we've written HTML. That's it. We started with a designed comp and we made sure we knew what we wanted the end result to look like in a prototype. This is an excellent example of building for [progressive enhancement](#). Start with the basics, because they work everywhere, then enhance up. When it's designed that way you only use the tools you need, you enhance efficiently, and there's a better chance that your finished product will be accessible.



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Time to do some CSS layout.

Sections are block-level elements. What do we do with the edges?

[#AEASEA](#)

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Can do edges with padding, but you can't really set a max width on the thing... probably need hand-tweaks with media queries

[#AEASEA](#)

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Or use a div wrapper to do a limited width for the inside sections.

Very easy, no harm, but have to remember to do it [#AEASEA](#)

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Wrap the whole thing, and limit the width, then use pseudoelements (::before, ::after) to color the edges [#AEASEA](#)

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Pseudoelements are the cleanest, most flexible, little off-screen rendering, and forced hidden overflow [#AEASEA](#)

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Three boxes in a row: you can float things and clear the float [#AEASEA](#)

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Floats require math, clearing the floats, difficult to do equal heights. They're a hack for page layout. [#AEASEA](#)

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Display: inline-block is another hack to layout three boxes [#AEASEA](#)

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(Bonus points: i'm finally starting to understand Codepen.)

#AEASEA

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Chris helped to found [Codepen](#), which is a web-based "playground" application where you can post things you're working on and others can see the html, css, and javascript. Until seeing it in action, I totally didn't get it.



Anne Gibson

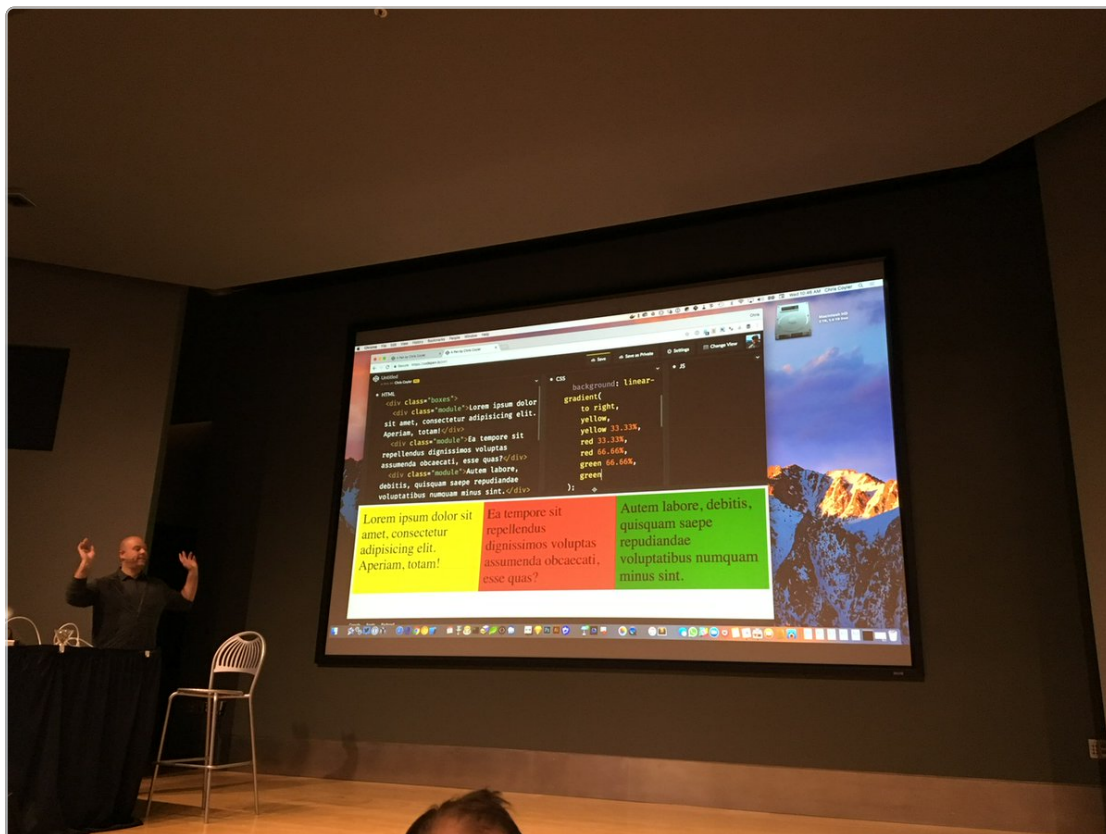
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Follow

Inline-block doesn't have equal heights but we can fake it by putting a linear gradient on the container holding the inline blocks

#AEASEA

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Equal height boxes by manipulating gradients [#aeasea](#)

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We could use a table for our 3 boxes, but a) screen readers announce “this is a table!” and it forces equal heights [#AEASEA](#)

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Can use display: table-cell to do table-like layouts. #AEASEA

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(@chriscoyier doesn't mention you can't span columns with display: table-cell which is a total PITA for complex designs AMHIK)

#AEASEA

1:49 PM - 5 Apr 2017

I know, because we've been trying to use it to lay out forms at the day job. grr.



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But we have flexbox! So why would we use display: table-cell?
Flexbox allows reordering and lots of options [#AEASEA](#)
codepen.io/enxaneta/full/...

1:50 PM - 5 Apr 2017

Flexbox playground

...

codepen.io

1



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A flexbox reference: css-tricks.com/snippets/css/a... [#AEASEA](#)

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A Complete Guide to Flexbox | CSS-Tricks

Our comprehensive guide to CSS flexbox layout.
This complete guide explains everything about
flexbox, focusing on all the different possible
css-tricks.com



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Flexbox is super worth learning. Stuff like this becomes developer muscle memory [#AEASEA](#)

1:52 PM - 5 Apr 2017



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We can also use CSS Grid to lay out three boxes. Works everywhere but Edge and that can be worked around [#AEASEA](#)

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H1 **Fucking learn flex box already.**



Josh Vickerson

@joshvickerson

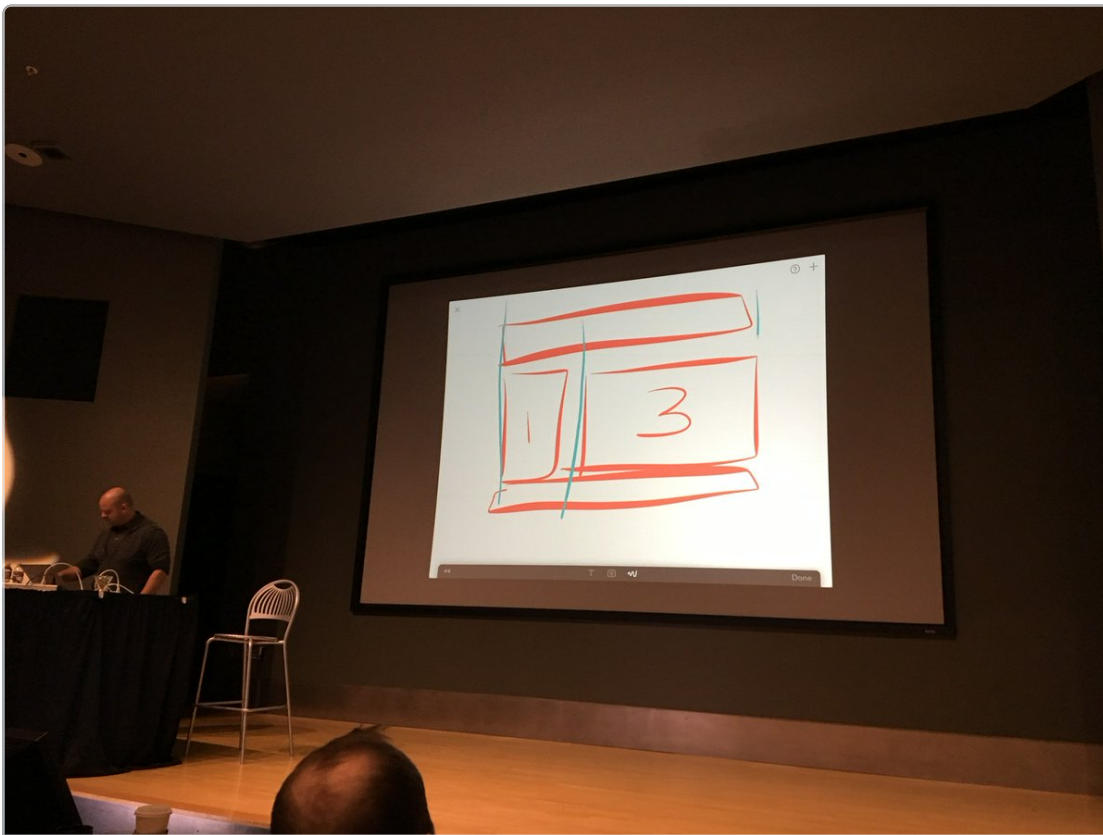
Follow

Taking good notes for myself at [#aeasea](#)

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2

Amen, Josh.



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Nice to see @chriscoyier live-sketching on an iPad on screen
#aeasea

1:55 PM - 5 Apr 2017

1



Juan Valera

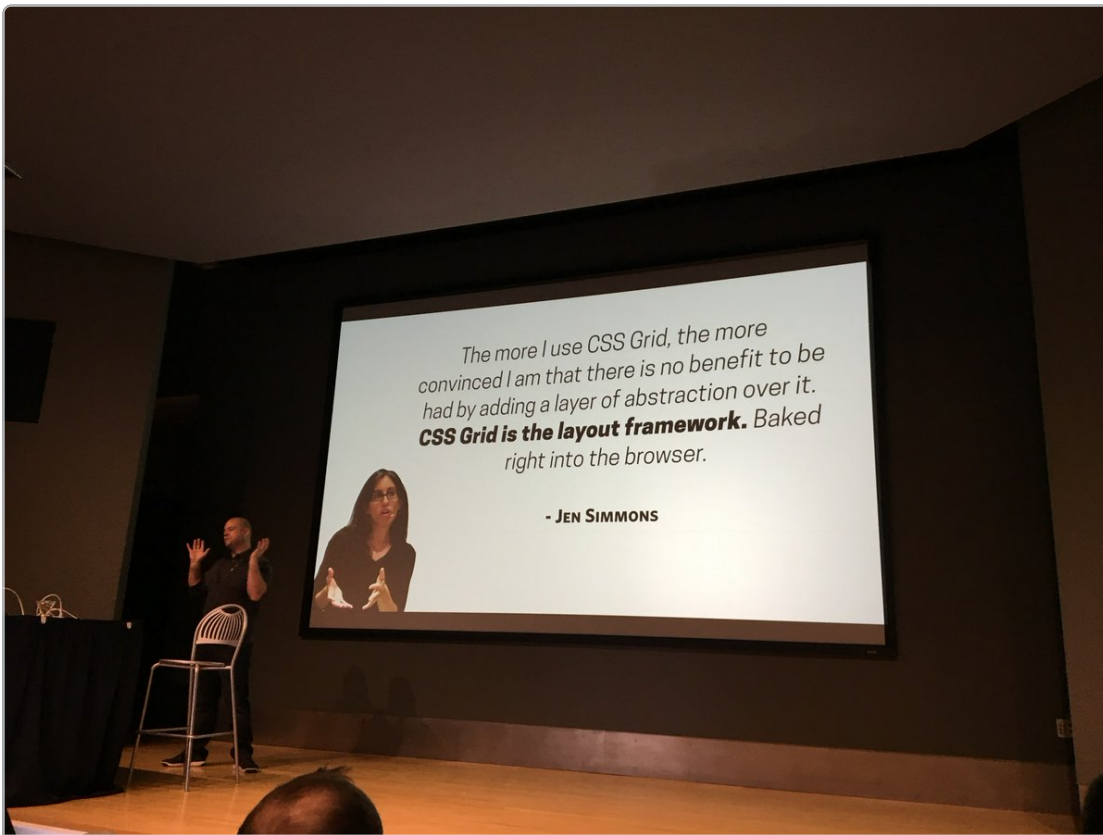
@justcallmejuan

Follow

Even @chriscoyier has to refer back to @chriscoyier 😂 #aeasea

1:59 PM - 5 Apr 2017 · Seattle, WA

2



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Shout-out to [@jensimmons](#) on CSS grid [#aeasea](#)

2:01 PM - 5 Apr 2017

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The only complex part of CSS grid (and flexbox) is gutters, but we'll probably figure that out as we go [#AEASEA](#)

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Grid-gap: 2rem — boom: gutters. #AEASEA

2:02 PM - 5 Apr 2017



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Collapsing grids with display: block is a really useful technique for tiny screens #AEASEA

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Note that @lukew and others who believe mobile-first is the way to go are probably right but we're doing the opposite today #AEASEA

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If you haven't seen [Luke's work on Mobile First](#), there are [lots of videos to catch up on](#).



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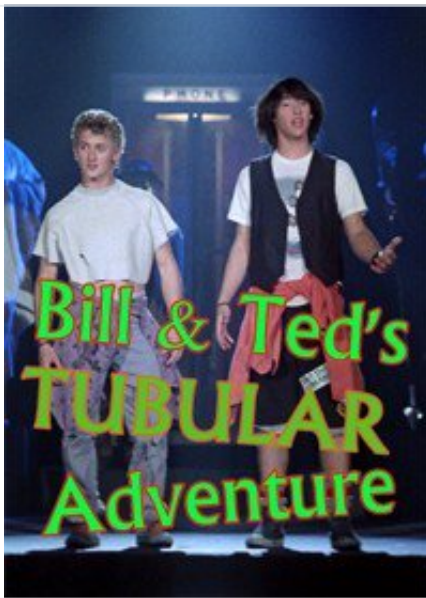
Display: Grid doesn't work well on mobile... but if you're just going to do a tube of content on mobile anyway who care? #AEASEA

2:15 PM - 5 Apr 2017

1

1

"Tube of content" makes me laugh and simultaneously describes most of my mobile designs.



jared bishop

@bishopart

Follow

#aeasea @chriscoyier

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Performance check: we added some CSS so we're at 5 requests and a very small site still #AEASEA

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Follow

Decision time: are we going to use custom fonts? Most projects, it's yes. "It's hipsterish not to" #AEASEA

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You can still use an old-school font stack if performance of web fonts is a performance issue [#AEASEA](#)

2:18 PM - 5 Apr 2017



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System Font Stack - if you don't care if the font matches across systems, you can use Mac system fonts on Macs & Windows on Windows [#AEASEA](#)

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(But um yeah now you're using Apple or Microsoft's branding... see Monday's sessions.) [#AEASEA](#)

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Using web safe fonts or system fonts causes 0 perceived performance problems for webfonts for loading [#AEASEA](#)

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Shout out to [@superyesmore](#) by [@chriscoyier](#) because he's been reading it a lot. (I posted on Jan 19...

[superyesmore.com/preconditions-...](#)) #AEASEA

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Anne Gibson

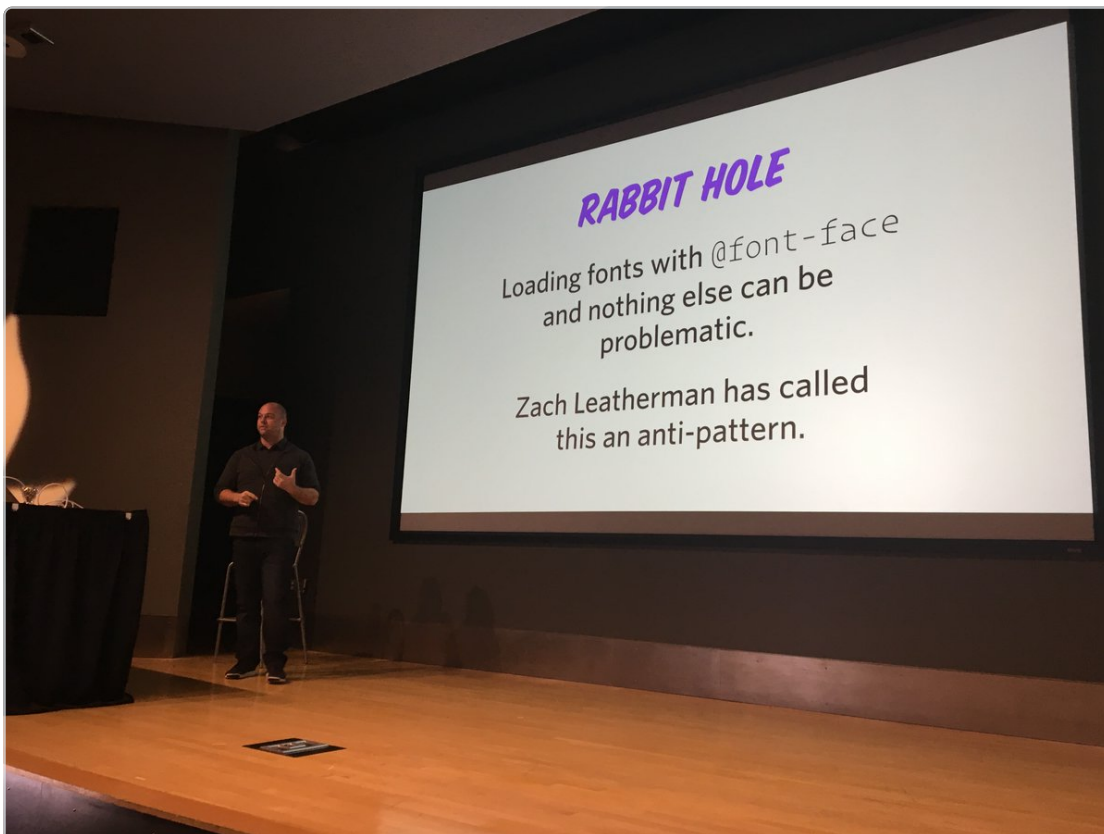
@perpendicularme

Follow

Loading fonts with [@font-face](#) and nothing else can be problematic.

There are tons of ways to import webfonts #AEASEA

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Josh Vickerson

@joshvickerson

Follow

.@zachleat getting a shoutout from @chriscoyier at #aeasea

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2



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Flash Of Unstyled Text (FOUT) was a big problem when webfonts first came out #AEASEA

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Now browsers wait for the font to load and then display text. (Which is why I get white space on Safari instead.) #AEASEA

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Each browser handles font loading differently. At least with FOUT people could read the site until load #AEASEA

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There are about 50 other ways to load the text.
zachleat.com/web/comprehens... #AEASEA

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Font-display: swap;
When this font loads, i want you to swap out the text using this font
#AEASEA

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You can size type at the html tag level in CSS.
Then you can use rems to size up and down everything at once.

[#AEASEA](#)

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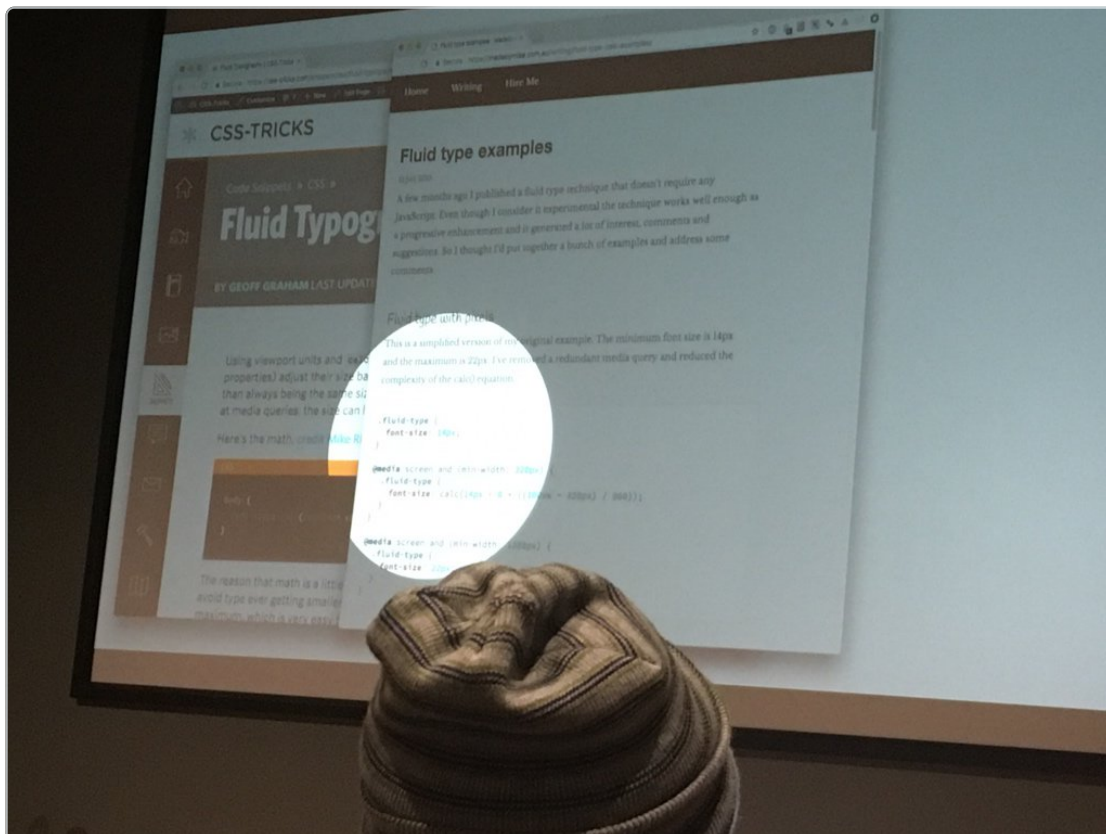
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You can also resize by viewport units but um, watch the sizes at
small viewports [#AEASEA](#)

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Den McHenry
@DenMcH

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Chris Coyier drops knowledge on people courtesy
[@MikeRiethmuller](#)'s awesome work on fluid type [#aeasea](#)

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3



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Performance check-in: 8 requests, total 265kb. Make sure to turn
off local copies of fonts when testing perf. [#AEASEA](#)

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SASS - just by using it, we get compression options and [@import](#)
[#AEASEA](#)

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SASS is shipped with a ton of different applications [#AEASEA](#)

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SASS allows for variables: `$font-family-body: /* font list goes here
*/`

Then later

```
.classname {  
font-family: $font-family-body;  
}  
#aeasea
```

2:47 PM - 5 Apr 2017



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Autoprefixer takes a pass on everything and prefixes places where
you might need it [#aeasea](#)

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You can be specific about what you want Autoprefixer to prefix.

#AEASEA

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You can even have it digest your google analytics data to decide what to prefix #AEASEA

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Time to build an icon system using SVG!#aeasea

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Why to use an icon system

1. Ease of use
2. Consistency
3. Performance#AEASEA

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There's a lot of performance to be gained by not sending an HTTP request for every icon on the page [#AEASEA](#)

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For a long time we did CSS sprites with all our icons in one file [#AEASEA](#)

It's not fun, it's just clever

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Icon fonts are used for the same reason - still 40 icons in one file. The point is performance [#AEASEA](#)

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Vector is such a big deal - there's no limit to their quality. Super-high-density screens like retina really pushed this [#AEASEA](#)

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Icon fonts - change size, change color, text shadow, etc. They looked like a fantastic solution [#AEASEA](#)

3:00 PM - 5 Apr 2017



Josh Vickerson

@joshvickerson

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Lots of good reasons not to use icon fonts, everyone. Use SVG instead. cloudfour.com/thinks/serious... [#aeasea](#)

5:21 PM - 5 Apr 2017 · Belltown, Seattle

Seriously, Don't Use Icon Fonts

Icons are everywhere. These “little miracle workers” (as John Hicks described them) help us reinforce meaning in the interfaces we design and build. Their cloudfour.com



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But then SVG becomes super-well supported. And they're crisper, easier to position, easier to style, more potential, more accessible [#AEASEA](#)

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The `<symbol>` tag in the SVG makes it easy to be called by other objects [#AEASEA](#)

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An `<SVG>` is like a div, and can contain multiple symbols [#AEASEA](#)

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For maintainability, keep all the icons in a folder, then use gulp to put them all into a single file [#AEASEA](#)

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Gulp isn't the only one that can create a folder full of symbols [#AEASEA](#)

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The Noun Project has an app for the Mac that provides the ability to search for icons, color them, and download them to your desktop

[#AEASEA](#)

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Jacob Wayne Smith

@j8ke

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You can also optimize your PNGs right in your gulp build process

bit.ly/2oJRBCB [#aeasea](#) [#svg](#)

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npm: gulp-svgmin

Minify SVG files with gulp.

npmjs.com



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Do keep an eye on what you're downloading to ensure they're consistent [#AEASEA](#)

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Illustrator has an Asset Export panel for multiple art boards in a file, and it exports multiple file types at once [#AEASEA](#)

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Sketch also allows for multiple named art boards with an easy export feature [#AEASEA](#)

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Icons can be fancy, not just single color. [#AEASEA](#)

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Options for combining SVGs into a file...

Grunt

Gulp

IcoMoon

Our own fingers [#AEASEA](#)

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IcoMoon is a web app that lets you select a bunch of SVGs and download both a folder of them and a sprite [#AEASEA](#)

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There's extra DOM weight to putting the same SVG image all over an html file - "use" is cleaner, performance is probably negligible [#AEASEA](#)

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HTML abstraction

For this demo, we're going to use the language Pug [#AEASEA](#)

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If you've never heard of Pug, it used to be called Jade [#AEASEA](#)

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Pug HTML-ish text compiles to HTML. #AEASEA

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Chris Coyier talking about Pug. My personal protip: it's great for writing HTML email (i.e., tables w/in tables) w/o getting lost.

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Pug allows you to include HTML chunks, something like what PHP does #AEASEA

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When building multi-page sites, it's immediately useful to abstract things like the header and footer #AEASEA

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CMSs are essentially HTML abstractions of templates #AEASEA

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Wordpress themes and templates do this using php #AEASEA

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Pug is whitespace-sensitive; indentations determine children
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Includes can have includes in Pug. So we can include icons.pug,
which could then include the icons #AEASEA

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Demo is the simplest form of the pages, but it could've been accordions and other similar things if we had >6 hours [#AEASEA](#)

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Responsive tables!

Tables are appropriate to use for tabular data.

(My life is tabular data. Sigh.) [#AEASEA](#)

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When tables squish down though, you might lose data. Or they read like crap. [#AEASEA](#)

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Put a div around the table and overflow:x-auto so it scrolls. That's one solution [#AEASEA](#)

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Some devices don't actually show the scrollbar- WebKit will allow you to style the scrollbar [#AEASEA](#)

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Brad Frost's Adaptive Map pattern: below a certain size pull back a static image of the map instead of the interactive map [#AEASEA](#)

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Zooming out to see a table is a problem, so we don't want to do that if we don't have to [#AEASEA](#)

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One option is to turn the row into a chunk of data and stack those chunks [#AEASEA](#)

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Another pattern is to collapse the data into tabs. (You can't cross-reference in that format.) [#AEASEA](#)

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Bootstrap 4 offers scroll left-right on tables [#AEASEA](#)

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[Zurb.com](#) offers a fixed left column [#AEASEA](#)

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Think about what people want to do with the table before picking a solution [#AEASEA](#)

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Do they need to compare? Which data is the most important? Can you hide things/show things? #AEASEA

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Filament Group has a repo called Tablesaw which has bunch of ways to deal with responsive tables #AEASEA

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Tablesaw link: [github.com/filamentgroup/...](https://github.com/filamentgroup/tablesaw) #AEASEA

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filamentgroup/tablesaw

A group of plugins for responsive tables. Contribute to tablesaw development by creating an account on GitHub.

github.com



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Time for some Javascript! #AEASEA

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jQuery - 72% of all websites use it (according to sources) but are we going to use it? #AEASEA

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I need to do a lot of “find something / do something” - yes to jQuery #AEASEA

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I’m doing a tiny bit of stuff - no to jQuery #AEASEA

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My site is state-heavy and I want an actual framework to manage it - no jQuery #AEASEA

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For some projects, mobile-first might not actually be the primary choice. Codepen would be really hard to do in mobile. #AEASEA

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On the other hand, a site for presentation should definitely be done mobile-first so it can go anywhere #AEASEA

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Once you get through the hard mobile-first choices it becomes “Oh hey now we have more room! What can we add?” #AEASEA

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(I have never used a Javascript library except when forced.)
(I have a bad habit of coding in php too.) #AEASEA

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Write a script for your script. Like write down what you want to have happen in normal words [#AEASEA](#)

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The script can help identify things you need. "When I click this button..." = "addEventListener"[#AEASEA](#)

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Structurally, start with a function, then table of contents, then structure of each of the elements [#AEASEA](#)

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Chris Coyier calls the IIFE pattern "safety pants for your code. You're not going to leak anything to the global scope." [#aeasea](#)

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2 1

Protection

Table of contents

Structure

```
(function() {  
  
  function init() {  
    bindDOMEvents();  
  }  
  
  function bindDOMEvents() {  
  
  }  
  
  function doSpecificThing() {  
  
  }  
  
  init();  
  
})();
```



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Framework of the javascript [#AEASEA](#)

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button.addEventListener("click", function());

There's adding an event listener to a button [#AEASEA](#)

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Protip: add `console.clear()` to the your JS in Codepen to clear old results each time your code runs. [#aeasea](#)

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At what point do we reach for a big framework like React, Vue, or Ember? [#AEASEA](#)

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- A site that is heavy on data and state
 - A single page app (SPA)
 - a site built from front-end APIs like a headless CMS setup
- [#aeasea](#)

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The images on the demo site are a performance hit.
First step, optimize them. ImageOptim is a good Mac app
[#AEASEA](#)

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“The most satisfying thing ever is to process every single image asset on your entire website in one commit” [#AEASEA](#)

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You may be able to install jpegoptim on the server and optimize the images directly on the server [#AEASEA](#)

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Image optimizers are updated on a regular basis so do this like quarterly or so [#AEASEA](#)

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.@chriscoyier has a rule in Hazel to automatically optimize images on his desktop, even screenshots [#AEASEA](#)

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[Hazel](#)



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The other big performance win is using responsive images in html
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You have a 1200px version, also make a 600px, then use srcset to let the browser choose the appropriate one [#AEASEA](#)

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Eric Portis wrote a good A List Apart article on [Responsive Images in Practice](#) that covers srcset.



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We're trying to avoid downloading extra images, so that's why we have to tell the browser so much about the image [#AEASEA](#)

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"Sizes" is an img attribute that provides CSS information on the browsers - if it's bigger than X, this size, otherwise that size
[#AEASEA](#)

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How do you know what the best versions of the images are?

[Responsivebreakpoints.com](https://responsivebreakpoints.com) helps with that [#AEASEA](#)

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Responsive Breakpoints Generator

The Responsive Image Breakpoints Generator efficiently analyzes each hi-res image and finds the best dimensions for embedding in your website responsivebreakpoints.com



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Depends on

- Site layout and RWD choices
- How many images are practical
- If you deal with pixel density
- Art direction [#AEASEA](#)

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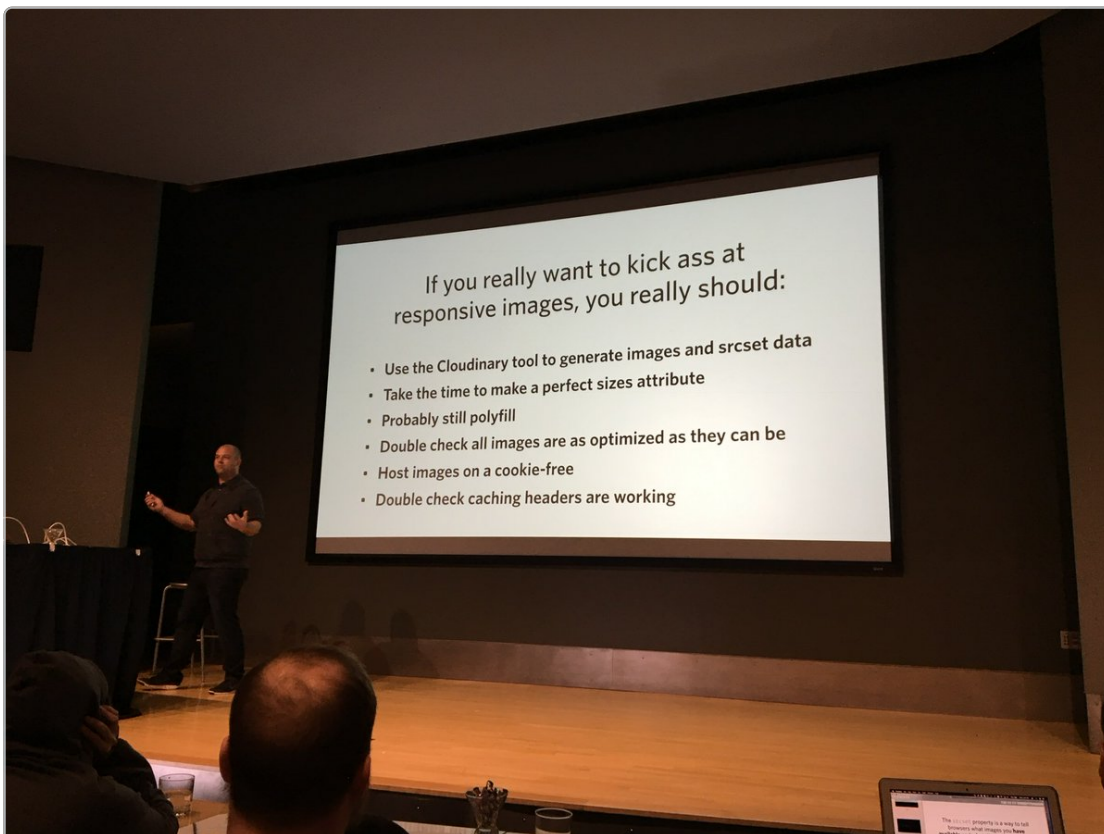
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Even after that, the sizes attribute depends entirely on what you're doing with it [#AEASEA](#)

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Steps for big media-heavy sites [#aeasea](#)

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A medium job of handling images - lazy-loading can help, CDNs help. Lazy-loading requires javascript and can be problematic [#AEASEA](#)

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The whole point of responsive images is to be responsible about bandwidth, and lazy-loading can help with that too [#AEASEA](#)

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Media queries give us most of the control we care about for background images [#AEASEA](#)

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Performance check-in. At 400px , we're at 225kb, and at 1200px we're at 362k. [#AEASEA](#)

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Probably can't use symbols in background-image CSS directly but you'd have to do it old-school [#AEASEA](#)

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CSS clip-path maker does awesome things to help you see what a clip path might look like. bennettfeely.com/clippy/ #AEASEA

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When you put clip-paths on things, you can cover chunks of the item you're applying the clip path to. #AEASEA

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Clip-paths can be transitioned. Hover states can have them. They're relatively performant. #AEASEA

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The easiest things you can do to fix performance is optimize images, gzipping files, and provide far-out cache headers #AEASEA

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Can we make a site work without a network connection? And should we? #AEASEA

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Service Workers are the key to ensure offline access. It's really Javascript low-level access to what the browser does. #AEASEA

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You can do things like affect what a browser does with HTTP requests. #AEASEA

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navigator.serviceWorker.register('/service_worker.js');
(Only we'd write better code around this...) #AEASEA

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"You could do serious office pranks with service workers." Chris Coyier (E.g., redirect site images to a picture of a unicorn) [#aeasea](#)

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Make sure to console.log everything in service workers so you know what's going on [#AEASEA](#)

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[.@chriscoyier](#) prefixes his console.log items with CLIENT: to tell the log that it's the registration code sending the logs [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

Service workers can only deal with files at the same scope as it or deeper. [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

In the serviceWorker.js file, [@chriscoyier](#) prefixes his console logs with WORKER: to make it clear where they're coming from [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

There are boilerplate files for service workers out on the web (and [@adactio](#) explained them yesterday) so lots of guidance [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

Chrome has an "offline" button in the inspector that lets you see what your site does when you're offline [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

A site with a serviceWorker can still display offline, which is great when it's a small presentation-heavy site [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

The concepts you've seen are real, but the situations are made up. Front-end developers do this stuff every day. [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

“A front-end developer is aware” — [@chriscoyier](#) [#aeasea](#) [pic.twitter.com/Ao8fLYF48y](#)

— Josh Vickerson (@joshvickerson) [April 5, 2017](#)

Front-end developers are aware of design, aware of the network, aware of DevOps, aware of the back-end, how things are tested... [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

A senior front-end developer has to have experience, a track record of good judgement [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

You need to have an impact beyond the direct job. You can be a force multiplier [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

Take what you know and make other people good at their jobs too. [#AEASEA](#)

— Anne Gibson (@perpendicularme) [April 5, 2017](#)

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