

#### LGBTQ.css

Color values are slighty saturated for preference. Massively WIP. Available on GitHub.



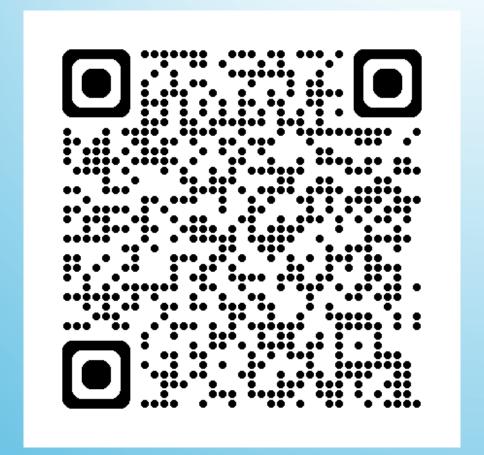
# Do you really need all that code?

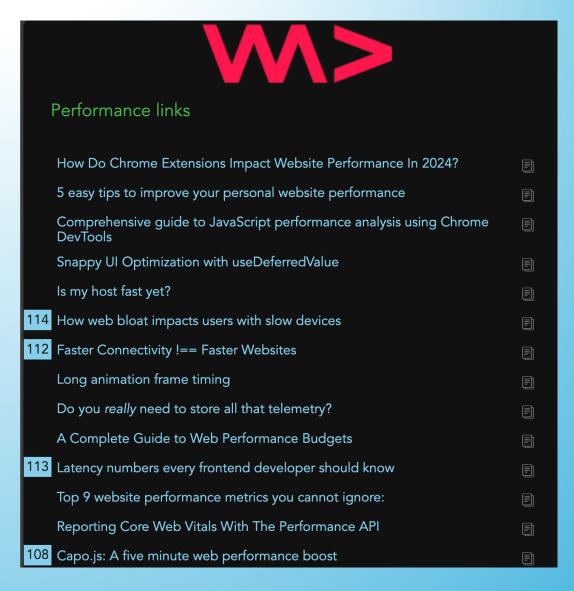
WeAreDevelopers LIVE "Front End Performance" Day Chris Heilmann – June 2024

## Web Performance is a vast subject...



## Dev Digest Performance links...



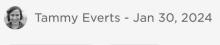


All the resources in this "talk"...



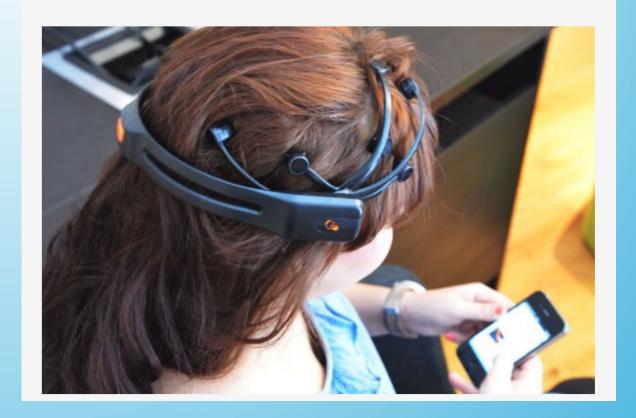
# Numbers && Humans...

## The psychology of site speed and human happiness



user experience

research



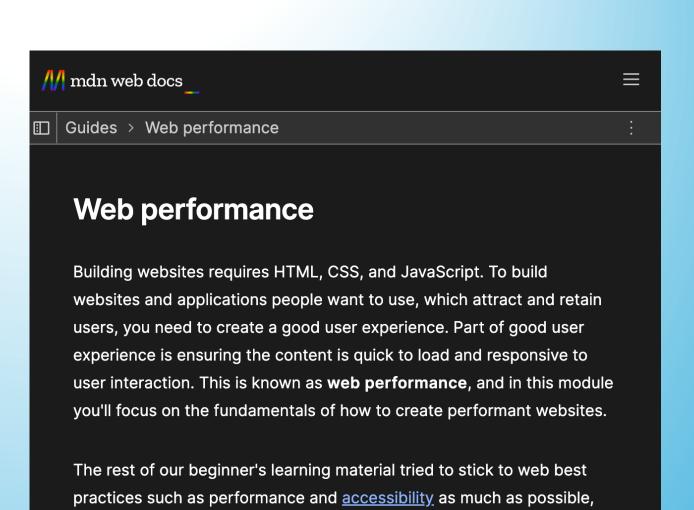
Courses and resources...



Getting started...



#### MDN Guide...



however, it is good to focus specifically on such topics too, and make

sure you are familiar with them.

https://developer.mozilla.org/en-US/docs/Learn/Performance



## Google...

## Welcome to Learn Performance!

Web performance is a crucial aspect of web development that focuses on the speed at which pages load, as well as how responsive they are to user input. When you optimize your website for performance, you're giving users a better experience. Better user experiences go a long way toward helping you achieve the goals you had in mind for your website.

Web performance may seem like a niche topic, but it is, in fact, both broad and quite deep. Given its depth as a subject area, it's vital that a course on web performance is both approachable, yet informative. The initial release of this course focuses on web performance fundamentals that beginners should find informative.

Ubiquitous advice...



#### Core web vitals...

#### How Core Web Vitals saved users 10,000 years of waiting for web pages to load

Tuesday, November 7, 2023



Today's The Fast and the Curious post explores how Core Web Vitals saved Chrome users more than 10,000 Years of waiting for web pages to load in 2023 (across Chrome desktop and Android) by quantifying the experience of sites and identifying opportunities to make improvements.

In 2020, we introduced <u>Web Vitals</u> - essential quality signals for webpages to ensure a better user experience. Since then, there has been a massive leap in web performance made possible by our work on Core Web Vitals (CWV) and its broader impact on the web. Today, over 40% of sites pass all of the CWV metrics, leading to pages that load and respond to interactions more quickly. Here's a closer look at the journey to help improve the performance for sites and some specific work done in the browser and the ecosystem to enable this achievement.

# Devtools to the rescue

#### Jiayi's Chronicles

Home About

#### Comprehensive guide to JavaScript performance analysis using Chrome DevTools

Let's see how to navigate the Chrome Devtools Performance tab to effectively analyse and improve the performance of your JavaScript while avoiding common errors. Our use case will be improving the rendering FPS of a real-world canvas library.

16 mag 2024 - 28 MIN READ

#### Pick a fast host

#### Is my host fast yet?

Real-world server response (Time to First Byte) latencies, as experienced by real-world users navigating the web.

#### Leaderboard: March 2024

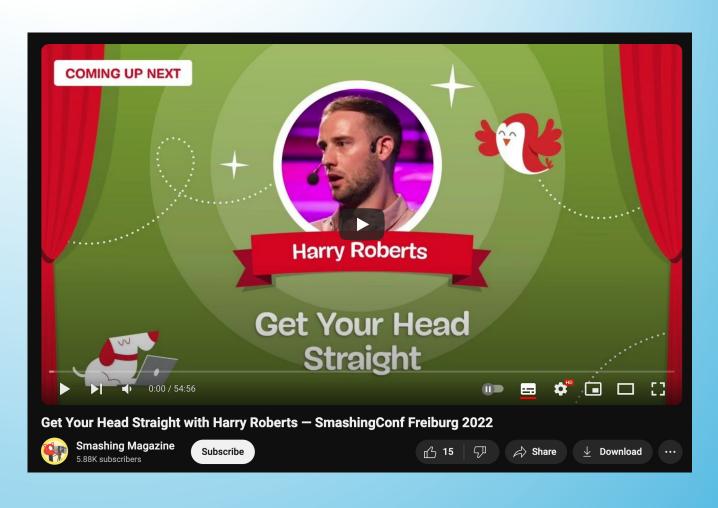


https://ismyhostfastyet.com/

Detailed advice...

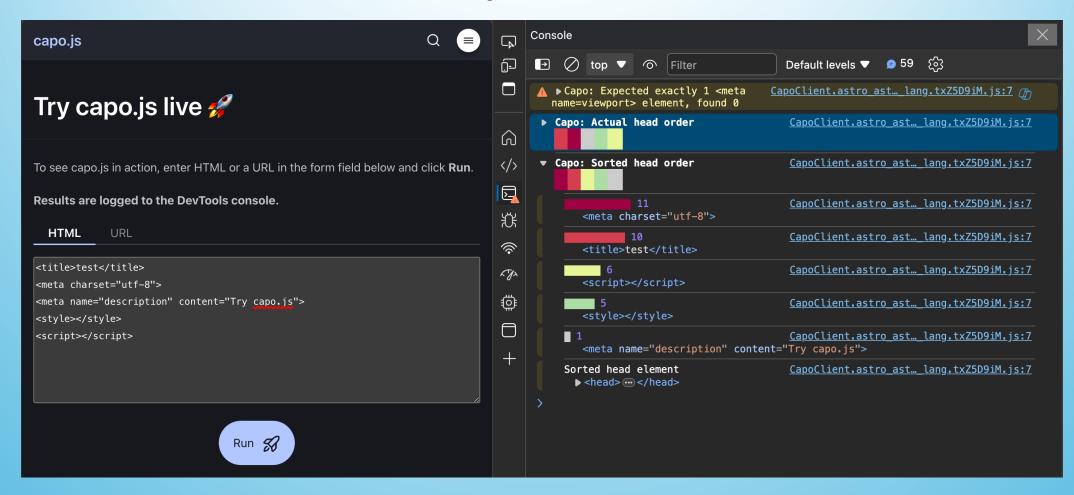


# It starts from the <head>



https://speakerdeck.com/csswizardry/get-your-head-straight https://www.youtube.com/watch?v=vgZ2B0rY4fs

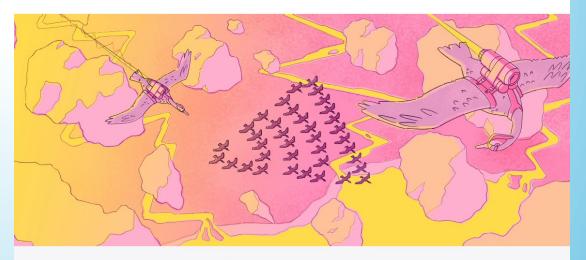
### Tools for head inspection...



#### Some solid advice

- Serve static HTML
- Optimise images
- Use system fonts
- Remove render blocking resources
- Use less JavaScript

https://blog.sentry.io/5-easy-tips-to-improve-your-personal-website-performance/



 $\mathbb{X}$ 







May 16, 2024 PERFORMANCE MONITORING

## 5 easy tips to improve your personal website performance



SALMA ALAM-NAYLOR

If you're a developer, you need a personal website. While billionaire-owned, algorithm-based social media platforms arbitrarily decide what people should and should not see on their timelines, there's no better time for you to carve out your own cozy corner on the web and *own your content*.



## Optimising images

- Smaller formats (WebP/AVIF)
- Lazy load images
- Set dimensions



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March 25, 2024 PERFORMANCE MONITORING

## Low effort image optimization tips



LAZAR NIKOLOV

"A picture is worth a thousand words". So if a picture takes more than 4 seconds to load, does it mean that your website's content fails to communicate a thousand words? In this blog post, we'll learn how to identify unoptimized images, how to fix them, and how to validate the fix — so your website can speak volumes with highly-optimized images.

Insights and surprises...



# How web bloat impacts users with slow devices

Site	Size		M3 Max		M1 Pro		M3/10		Tecno S8C		Itel P32	
	wire	raw	LCP*	<b>CPU</b>	LCP*	<b>CPU</b>	LCP*	CPU	LCP*	CPU	LCP*	CPU
danluu.com	6kB	18kB	50ms	20ms	50ms	30ms	0.2s	0.3s	0.4s	0.3s	0.5s	0.5s
HN	11kB	50kB	0.1s	30ms	0.1s	30ms	0.3s	0.3s	0.5s	0.5s	0.7s	0.6s
MyBB	0.1MB	0.3MB	0.3s	0.1s	0.3s	0.1s	0.6s	0.6s	0.8s	0.8s	2.1s	1.9s
phpBB	0.4MB	0.9MB	0.3s	0.1s	0.4s	0.1s	0.7s	1.1s	1.7s	1.5s	4.1s	3.9s
WordPress	1.4MB	1.7MB	0.2s	60ms	0.2s	80ms	0.7s	0.7s	1s	1.5s	1.2s	2.5s
WordPress (old)	0.3MB	1.0MB	80ms	70ms	90ms	90ms	0.4s	0.9s	0.7s	1.7s	1.1s	1.9s
XenForo	0.3MB	1.0MB	0.4s	0.1s	0.6s	0.2s	1.4s	1.5s	1.5s	1.8s	FAIL	FAII
Ghost	0.7MB	2.4MB	0.1s	0.2s	0.2s	0.2s	1.1s	2.2s	1s	2.4s	1.1s	3.5s
vBulletin	1.2MB	3.4MB	0.5s	0.2s	0.6s	0.3s	1.1s	2.9s	4.4s	4.8s	13s	16s
Squarespace	1.9MB	7.1MB	0.1s	0.4s	0.2s	0.4s	0.7s	3.6s	14s	5.1s	16s	19s
Mastodon	3.8MB	5.3MB	0.2s	0.3s	0.2s	0.4s	1.8s	4.7s	2.0s	7.6s	FAIL	FAII
Tumblr	3.5MB	7.1MB	0.7s	0.6s	1.1s	0.7s	1.0s	7.0s	14s	7.9s	8.7s	8.7s
Quora	0.6MB	4.9MB	0.7s	1.2s	0.8s	1.3s	2.6s	8.7s	<b>FAIL</b>	FAIL	19s	29s
Bluesky	4.8MB	10MB	1.0s	0.4s	1.0s	0.5s	5.1s	6.0s	8.1s	8.3s	FAIL	FAII
Wix	7.0MB	21MB	2.4s	1.1s	2.5s	1.2s	18s	11s	5.6s	10s	<b>FAIL</b>	FAII
Substack	1.3MB	4.3MB	0.4s	0.5s	0.4s	0.5s	1.5s	4.9s	14s	14s	<b>FAIL</b>	FAII
Threads	9.3MB	13MB	1.5s	0.5s	1.6s	0.7s	5.1s	6.1s	6.4s	16s	28s	66s
Twitter	4.7MB	11MB	2.6s	0.9s	2.7s	1.1s	5.6s	6.6s	12s	19s	24s	43s
Shopify	3.0MB	5.5MB	0.4s	0.2s	0.4s	0.3s	0.7s	2.3s	10s	26s	FAIL	FAII
Discourse	2.6MB	10MB	1.1s	0.5s	1.5s	0.6s	6.5s	5.9s	15s	26s	<b>FAIL</b>	FAII
Patreon	4.0MB	13MB	0.6s	1.0s	1.2s	1.2s	1.2s	14s	1.7s	31s	9.1s	45s
Medium	1.2MB	3.3MB	1.4s	0.7s	1.4s	1s	2s	11s	2.8s	33s	3.2s	63s
Reddit	1.7MB	5.4MB	0.9s	0.7s	0.9s	0.9s	6.2s	12s	1.2s	8	FAIL	FAII

https://danluu.com/slow-device/



#### **Faster Connectivity !== Faster Websites**

2024-04-15

This post from Dan Luu discussing <u>how web bloat impacts users with</u> <u>slow devices</u> caused me to reflect on the supposition that faster connectivity means faster websites.

I grew up in an era when slow internet was the primary limiting factor to a great experience on the web. I was always pining for faster speeds: faster queries, faster page navigations, faster file downloads, etc. Whatever I wanted to do with a computer, bandwidth seemed like the sole limiting factor to a great experience.

So that's why I still often mistakenly equate a faster connection with a faster (and better) experience on the web. And I often need reminding that's not necessarily true.

#### Client or server?

#### Comparison

This page compares all rendering methods, listing their pros and cons. You can click on each point to view a detailed explanation.

#### **CSR**

#### Pros

- 1. Loads independently from its data
- 2. Loads quickly once cached
- 3. Page transitions are instantaneous
- 4. Can reuse data during navigations
- 5. Unmatched performance with SWR
- 6. Is completely free to host
- 7. Uses minimal data
- 8. Is very simple to develop
- 9. Requires no dedicated server

#### Cons

- 1. Initial load might be a bit slow
- 2. Loading is delayed upon cache invalidation
- 3. Delayed data fetching
- 4. Not great for SEO

https://github.com/theninthsky/client-side-rendering

Close to the metal...









Sign in

Home > Articles





#### Rendering performance



How browsers work...

Users notice if sites and apps don't run well, so optimizing rendering performance is crucial!

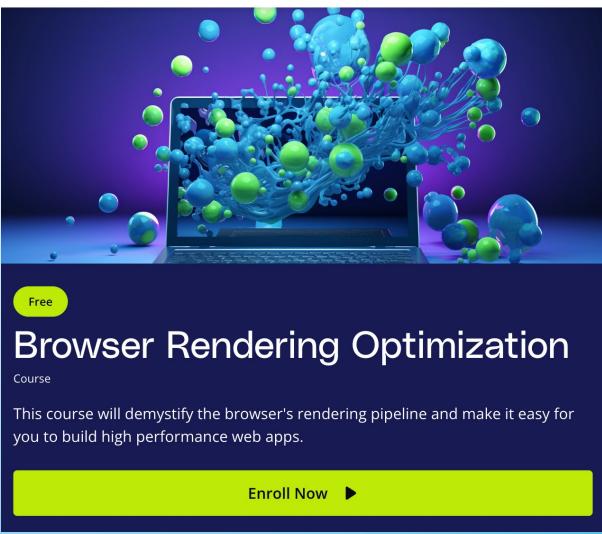
Paul Lewis



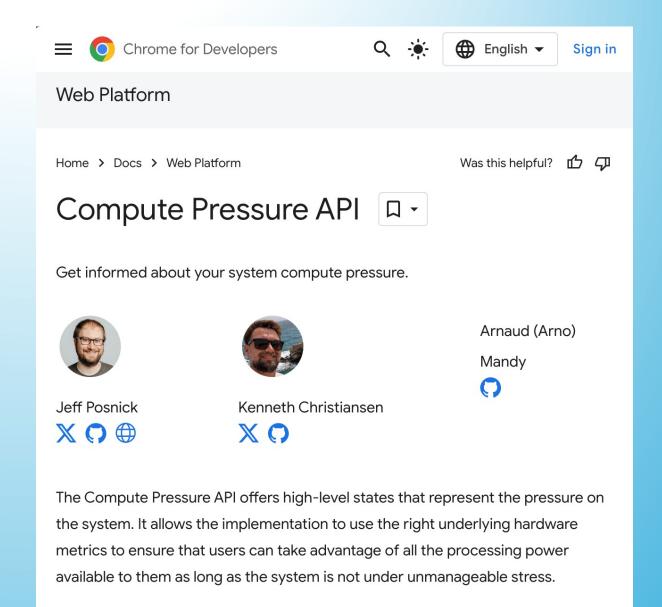
Users of today's web expect that the pages they visit will be interactive and smooth, and that's where you need to increasingly focus your time and effort. Pages shouldn't just load quickly, but also respond quickly to user input throughout their entire lifecycle. In fact, this aspect of the user experience is precisely what the Interaction to Next Paint (INP) metric measures. A good INP means that a page was consistently and reliably responsive to the user's needs.

## Digging deep...





## Do we need more control?



Things to consider...



### Always bet on the platform!

Microsoft Edge migrating its UI from React to web components.

"The UI is now 42% faster for Edge users and a whopping 76% faster for those on a device without an SSD or with less than 8GB RAM!







Written By

published

Microsoft Edge Team

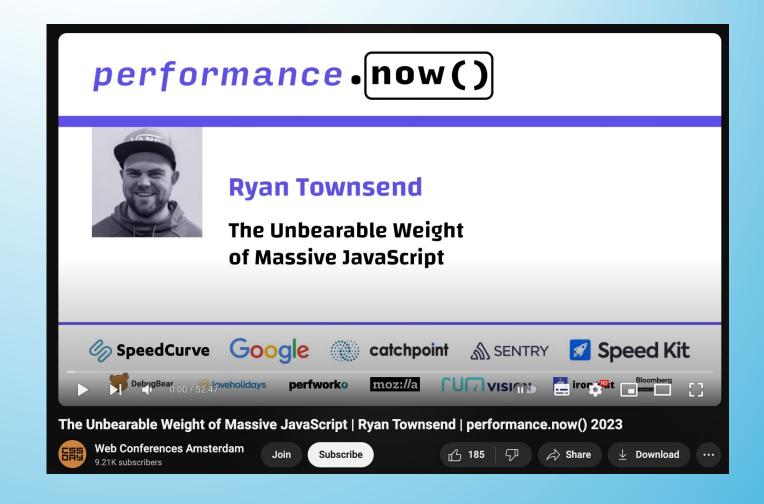
May 28, 2024

Over the past month, you may have noticed that some of Edge's features have become faster and more responsive. That's because Edge is on a journey to make all user interactions in the browser blazing fast starting with some of our newest features and core features.

Starting with Edge 122, the Browser Essentials UI is now much more responsive. The UI is now 42% faster for Edge users and a whopping 76% faster for those of you on a device without an SSD or with less than 8GB RAM!



Do you need JavaScript for everything?



# Things to ponder

- Check what HTML can do before reinventing it
  - links ping
  - images loading
  - details/summary
  - dialog
  - popover
  - datalist
- Let the browser handle things...
- Do your users need that feature or do you want them to?
- The best performing code is the one you never have to write...

# Thanks, let's rock and roll...

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<a href="https://christianheilmann.com">https://christianheilmann.com</a>

