



**Did we (b development)
lose the right direction?**

@stefanjudis



**This is a talk about
general "best practices"...**



Heyo, I'm Stefan!

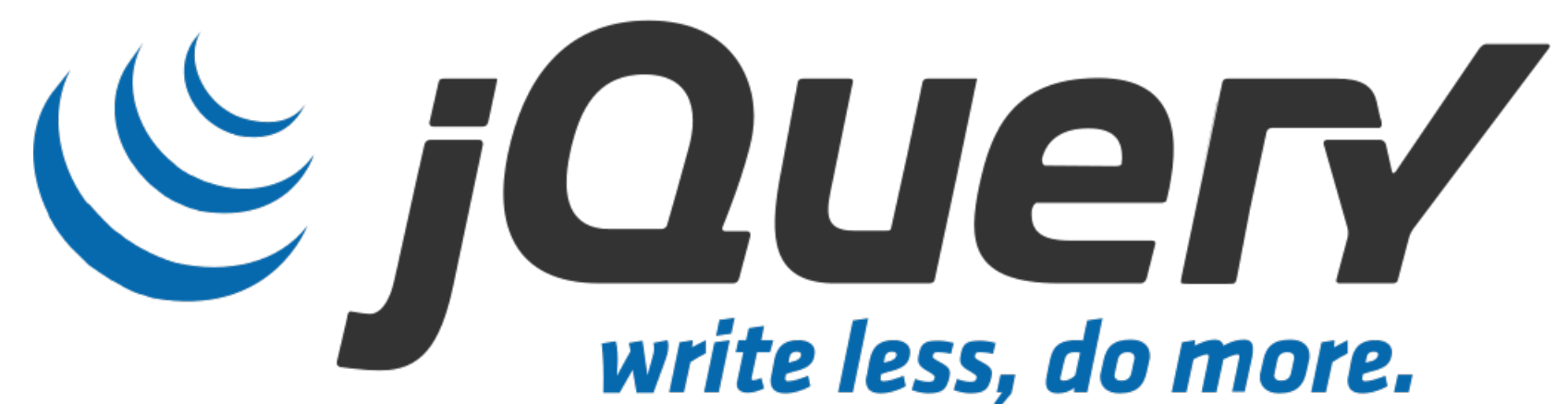
@stefanjudis
www.stefanjudis.com





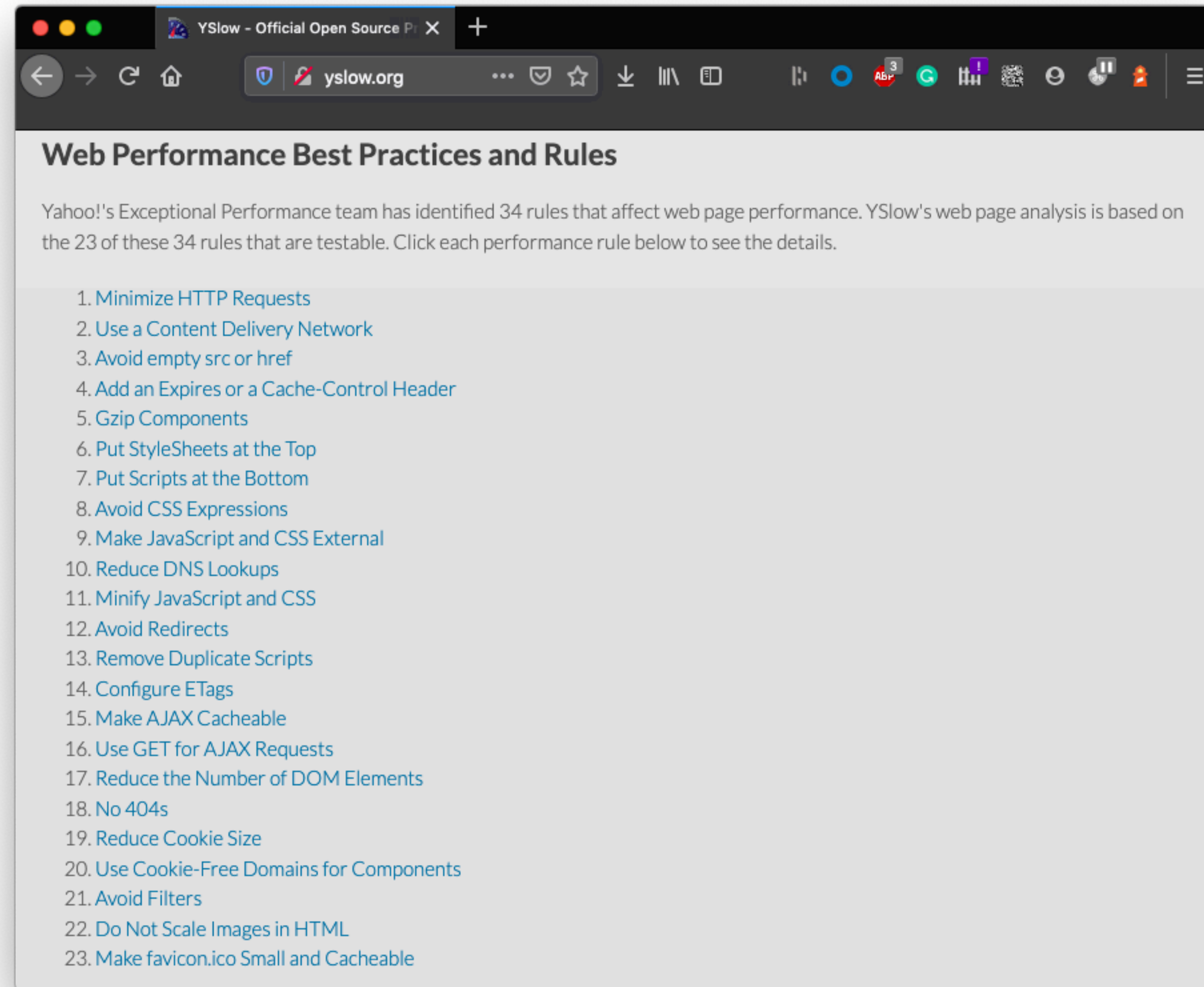
The state of web development ten years ago...





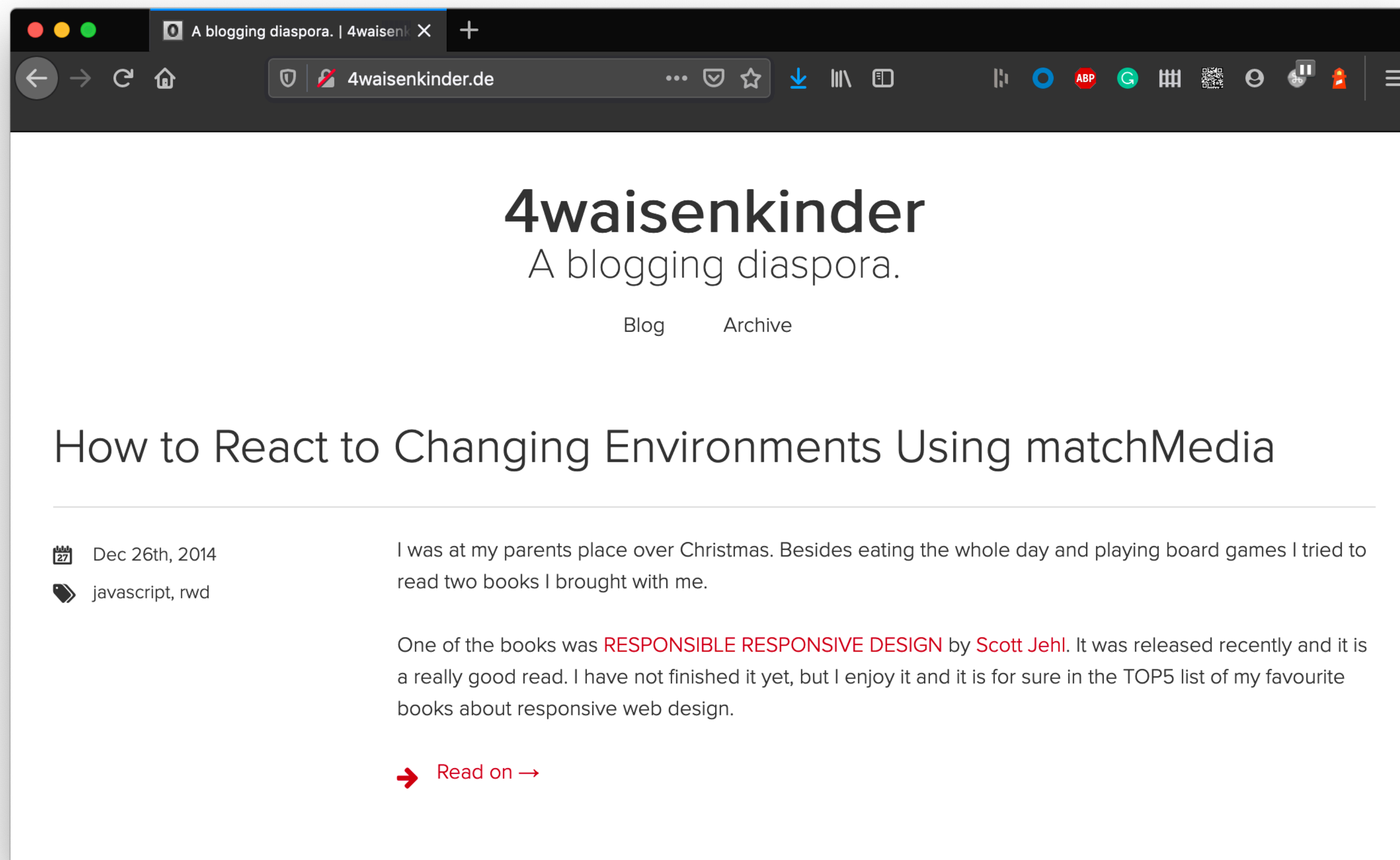


yslow.org





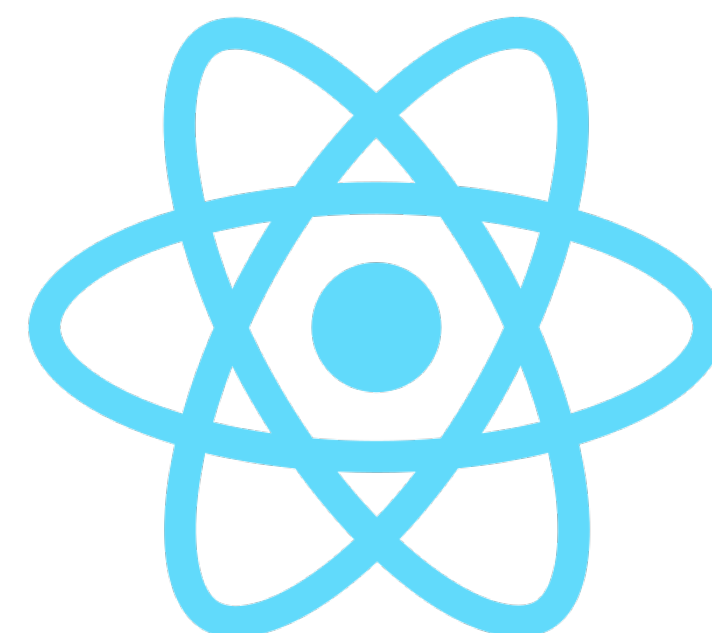
4waisenkinder.de







ANGULARJS
by Google

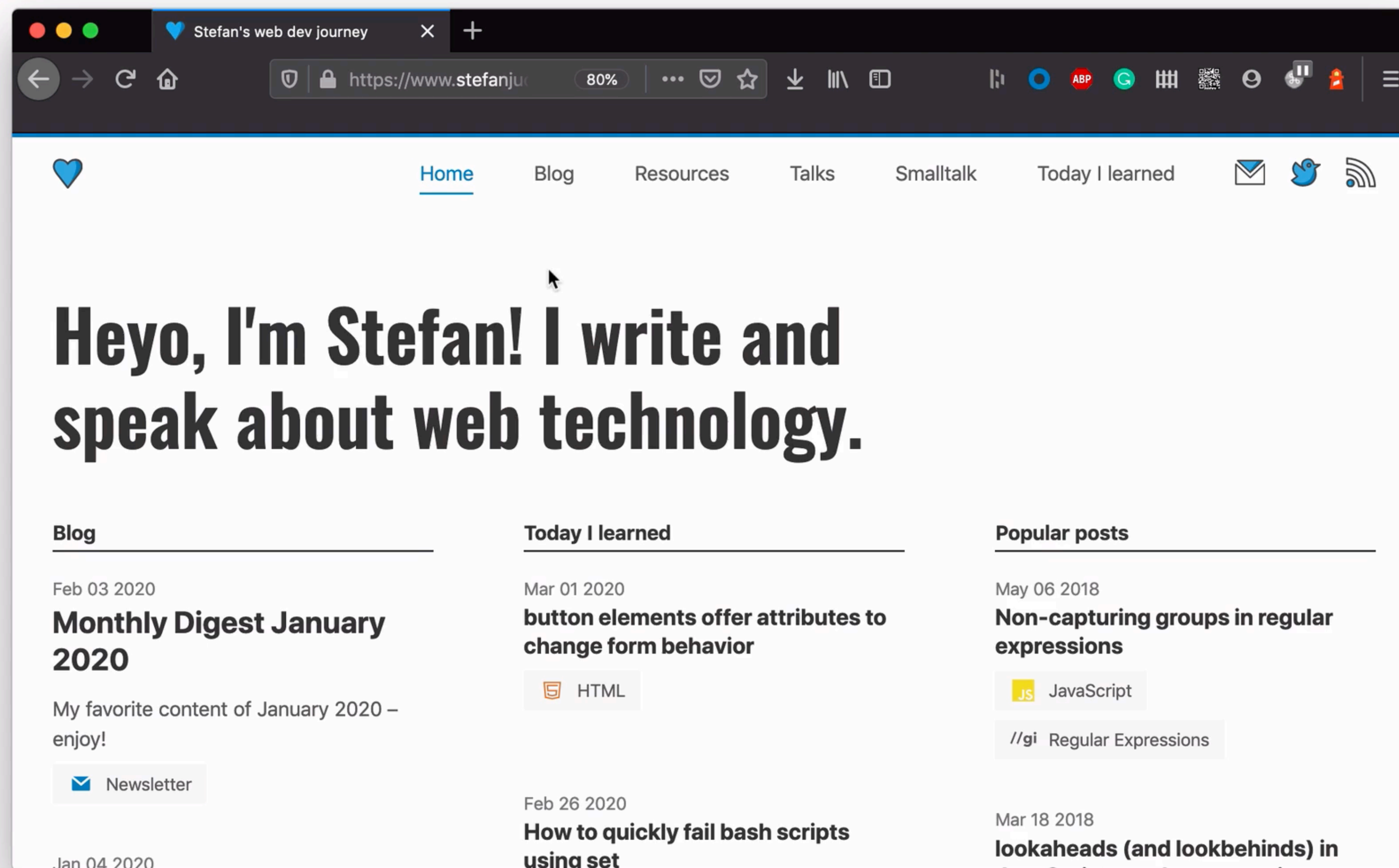




**I love technology and I
love writing JavaScript!**



stefanjudis.com



2017 – 2020



Performance



Accessibility



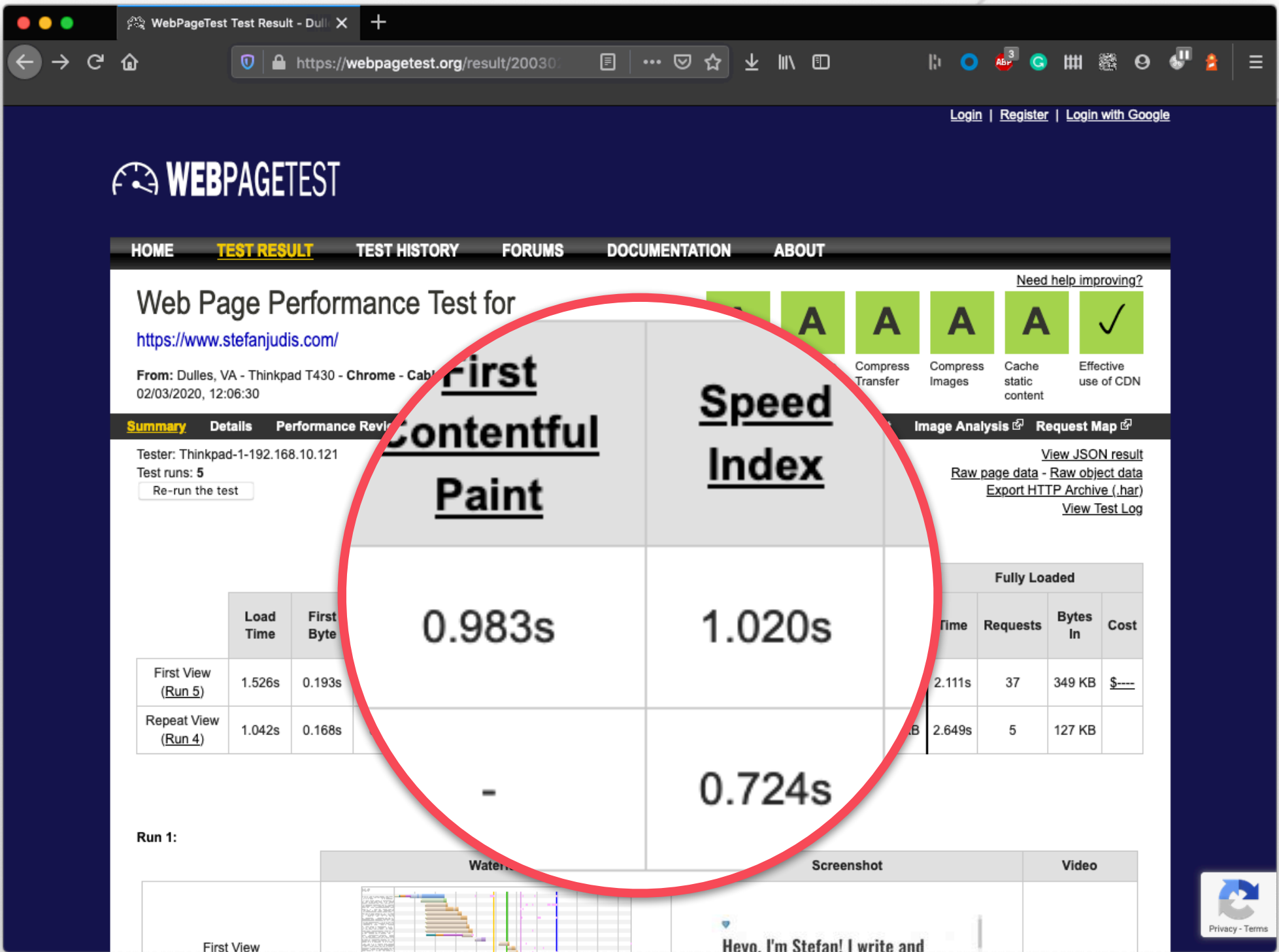
Best Practices



SEO

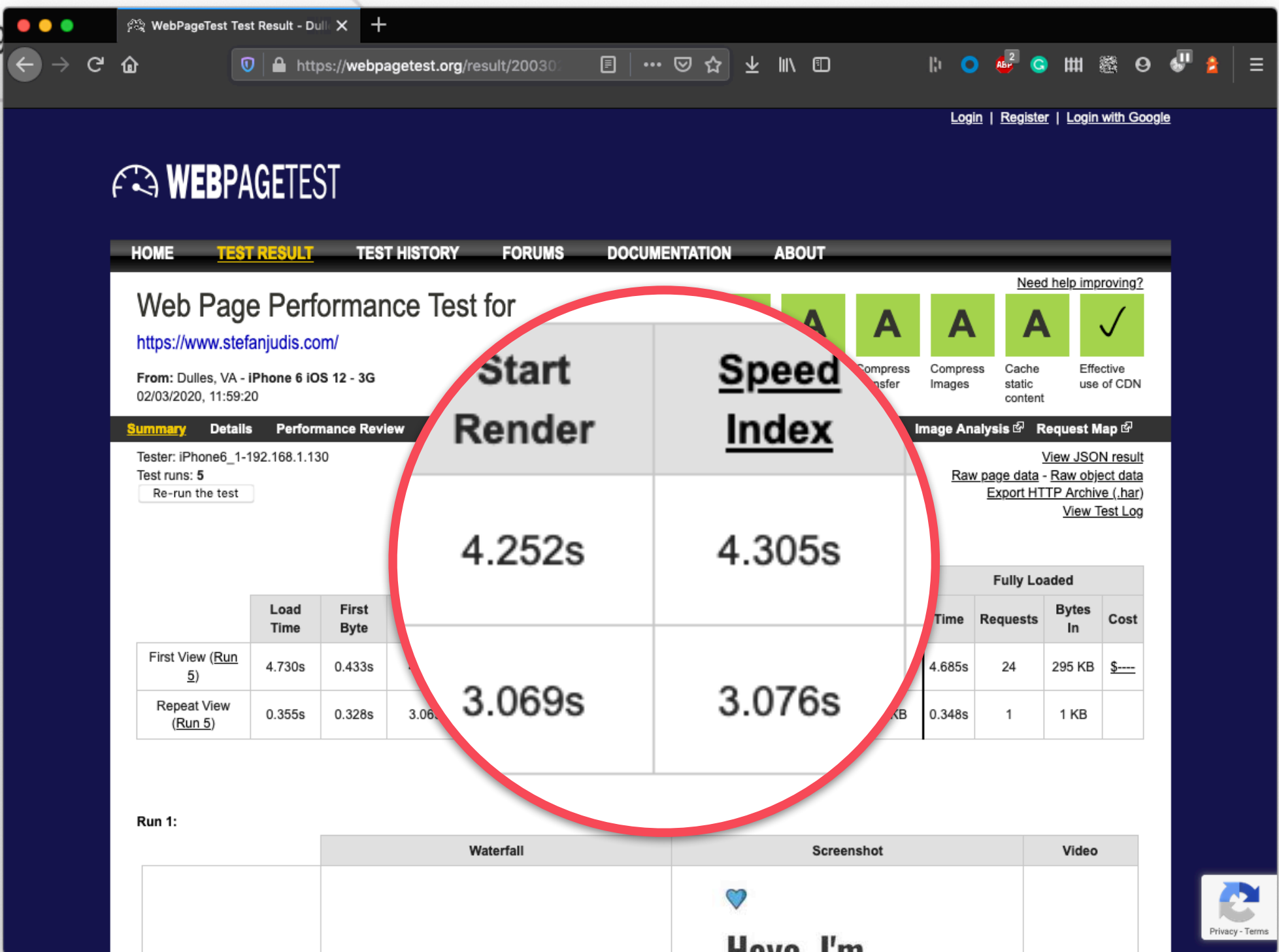


Progressive Web App



Chrome - Cable

50-89



iPhone 6 - 3G



**Usually, any score above a 90
gets you in the top ~5% of
performant websites.**

Lighthouse documentation



HTTP/2

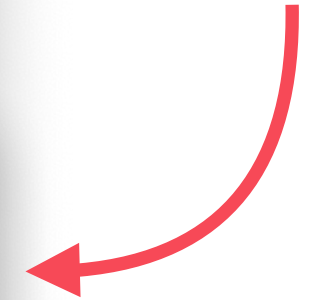
Everything's compressed and minified!

```
<script nomodule src="
```

```
unicode-range: U+0000  
U+02DC, U+2000-206F  
U+FEFF, U+FFFD;  
font-display: swap;
```

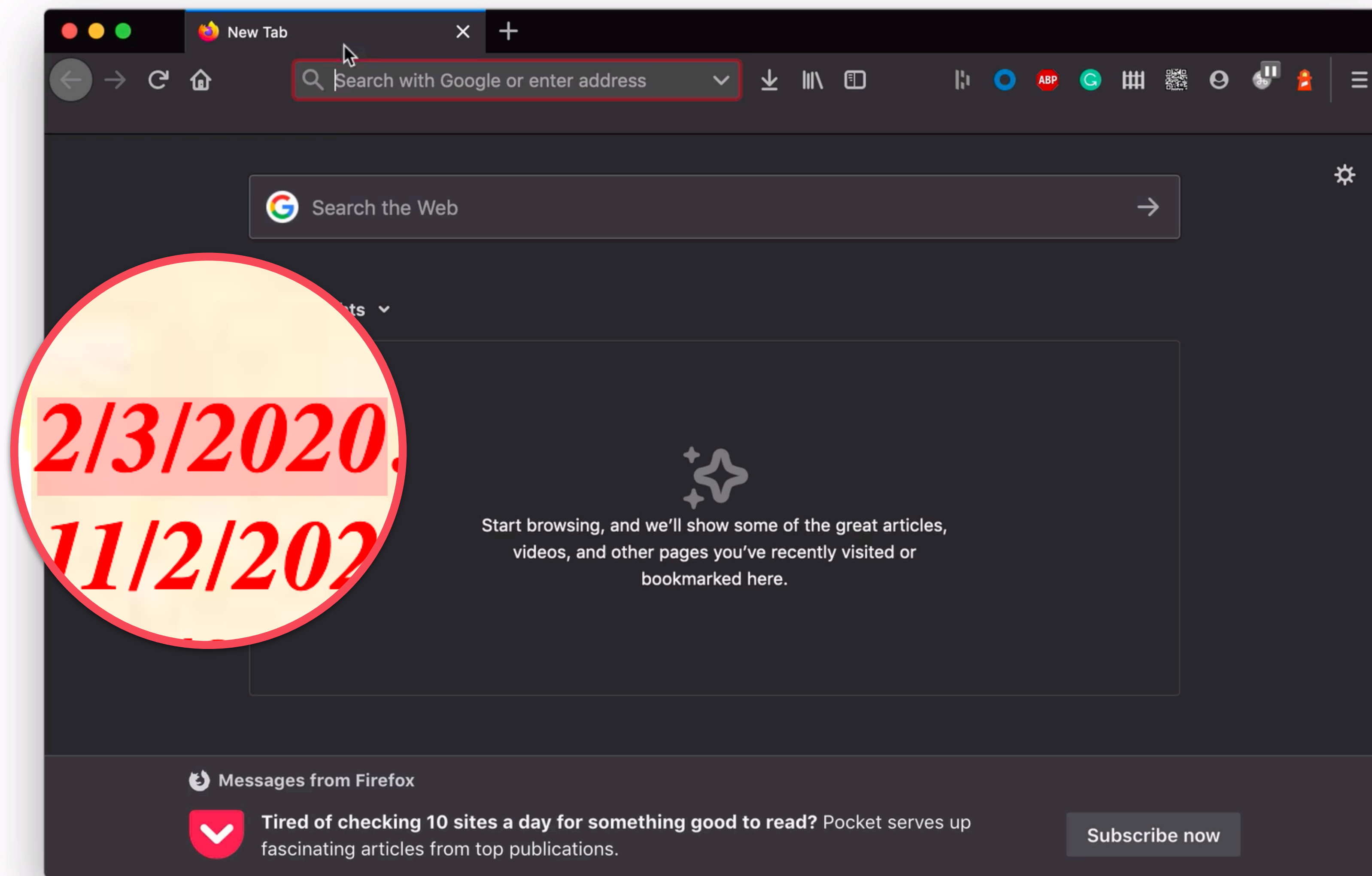
```
<link rel="modulepreload" href=
```


Code splitting





www.fmboschetto.it





```
<body bgcolor="#FFFFFF" link="#FF0000" vlink="#FF0000" alink="#FF0000" background="sfondo2.gif">
<div align="center">
  <table border="0" cellspacing="0" height="1478" width="731">
    <center>
      <tr>
        <td width="177" height="224" style="border-style: ridge; border-width: 2" bgcolor="#FFFF">
          <p align="center"> 
          </p>
        </td>
        <td width="544" height="224" colspan="3" background="sfondo.jpg">
          <p align="center"><b><i><font color="#0000FF" size="4"> L'ingegner Franco Maria Bosche
          presenta:</font></i></b>
          <p align="center">
          <p align="center"><font face="Times New Roman, Times, serif" size="7" color="#FF0000">
            mio sito didattico</font>
```



http://www.fmboschetto.it/



Performance



Accessibility



Best
Practices



SEO



Progressive
Web App

0-49 50-89 90-100



http://4waisenkinder.de/



Performance



Accessibility



Best
Practices



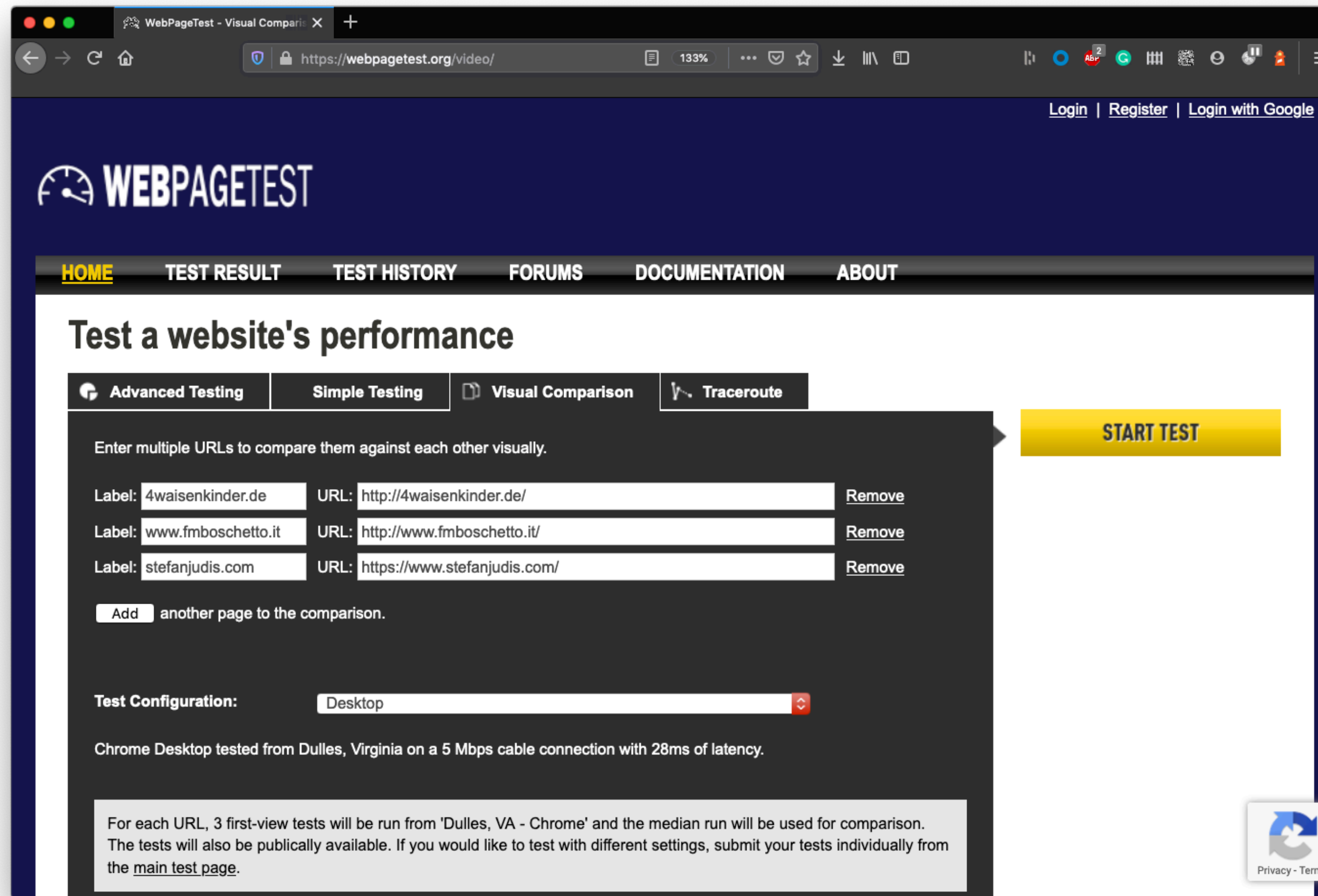
SEO



Progressive
Web App

0-49 50-89 90-100

webpagetest.org/video/



The screenshot shows the WebPageTest Visual Comparison interface in a web browser. The browser's address bar displays `https://webpagetest.org/video/` at 133% zoom. The page has a dark blue header with the WebPageTest logo and navigation links: [Login](#), [Register](#), and [Login with Google](#). Below the header is a navigation bar with links: [HOME](#), [TEST RESULT](#), [TEST HISTORY](#), [FORUMS](#), [DOCUMENTATION](#), and [ABOUT](#).

The main content area is titled "Test a website's performance" and features four tabs: **Advanced Testing**, **Simple Testing**, **Visual Comparison** (which is active), and **Traceroute**. The Visual Comparison tab contains the following elements:

- A text prompt: "Enter multiple URLs to compare them against each other visually."
- A table with three rows of test configurations:

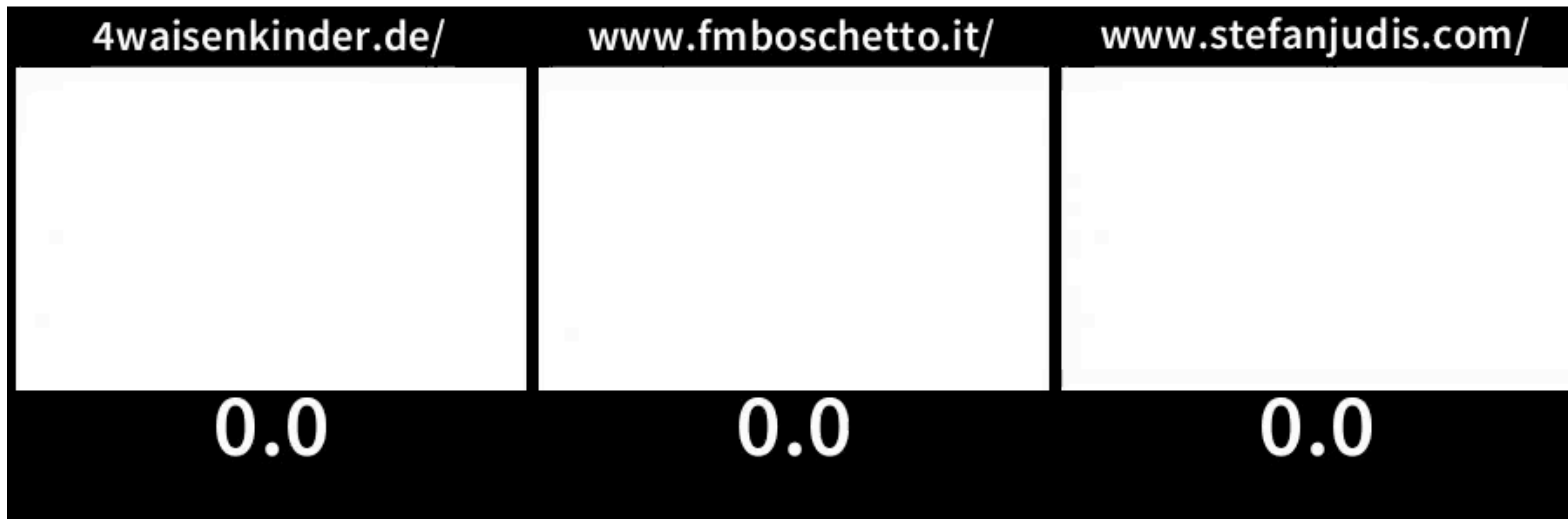
Label	URL	Action
4waisenkinder.de	http://4waisenkinder.de/	Remove
www.fmboschetto.it	http://www.fmboschetto.it/	Remove
stefanjudis.com	https://www.stefanjudis.com/	Remove
- An "Add" button followed by the text "another page to the comparison."
- A "Test Configuration:" section with a dropdown menu set to "Desktop".
- A note: "Chrome Desktop tested from Dulles, Virginia on a 5 Mbps cable connection with 28ms of latency."
- A footer box stating: "For each URL, 3 first-view tests will be run from 'Dulles, VA - Chrome' and the median run will be used for comparison. The tests will also be publically available. If you would like to test with different settings, submit your tests individually from the [main test page](#)."

A large yellow "START TEST" button is positioned to the right of the configuration area. In the bottom right corner, there is a "Privacy - Terms" link with a circular arrow icon.



Chrome – Cable

webpagetest.org/video/view.php?id=200302_2df0157ba9ea8586f5d987f7a1c3d52ed5e2a874





**Stefan, you just
messed it up!**



**Maybe, but how can it
be so easy to mess up?**



fmboschetto.it

4waisenkinder.de

stefanjudis.com

Overall page weight

265KB / 284KB

159KB / 300KB

340KB / 940KB

index.html

8KB / 32KB

6KB / 18KB

108KB / 340KB

CSS resources

0

1

1

JS resources

2
(2KB / 6KB)

6
(68KB / 177KB)

22
(183KB / 512KB)

Images resources

32
(246KB / 254KB)

0*

0*

Speed Index (LTE)

1.4s / 0.8s

2.1s / 0.7s

2.3s / 1.5s

Lighthouse Perf Score

100

97

90

*ignoring tracking pixel



Performance

Metrics



■ First Contentful Paint	2.7 s	■ Time to Interactive	4.5 s
● Speed Index	2.7 s	● Total Blocking Time	170 ms
■ Largest Contentful Paint	2.7 s	● Cumulative Layout Shift	0

Values are estimated and may vary. The [performance score is calculated](#) directly from these metrics. [See calculator.](#)



15% - first contentful paint

15% - time to interactive

15% - speed index

JavaScript blocks
the main-thread!

25% - largest contentful paint

25% - total blocking time


5% - cumulative layout shift

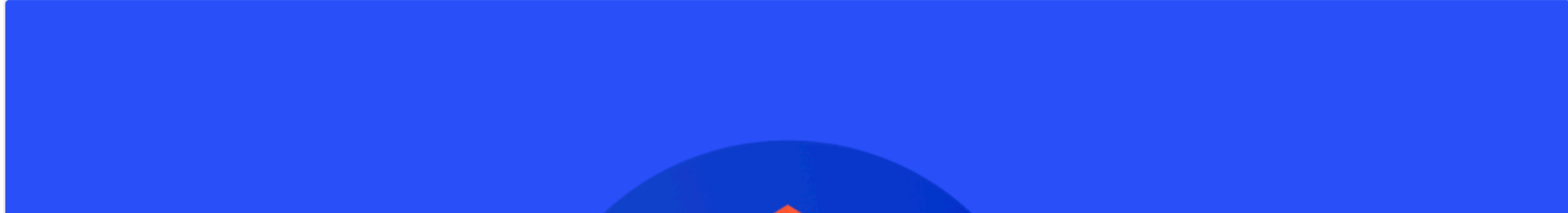


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Latest Articles Product Engineering **Web Platform**

Lighthouse Changes How Performance Score is Calculated


Karolina Szczur
March 27, 2020



Lighthouse Scoring Calculator

	Value	Metric Score	Weighting
Paint)	<input type="range"/>	<input type="range"/>	20%
	1,000 ms	100	
	<input type="range"/>	<input type="range"/>	26.7%
	5,210 ms	60	
Paint)	<input type="range"/>	<input type="range"/>	6.7%
	2,860 ms	79	
	<input type="range"/>	<input type="range"/>	33.3%
	7,090 ms	52	
	<input type="range"/>	<input type="range"/>	13.3%
	5,030 ms	71	

68

	Value	Metric Score	Weighting
FCP (First Contentful Paint)	<input type="range"/>	<input type="range"/>	15%
	1,970 ms	95	

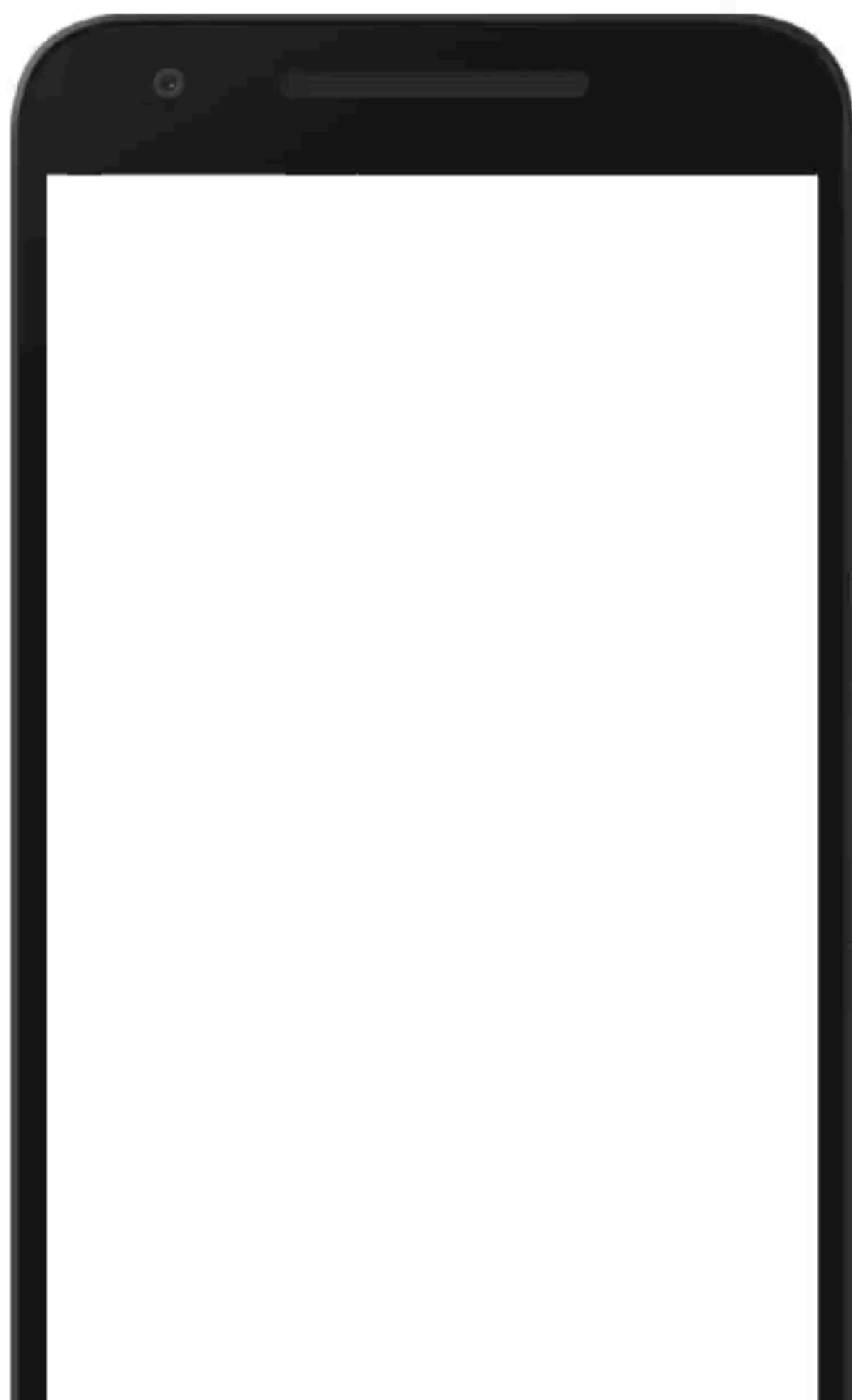
calibreapp.com/blog/lighthouse-changes-scoring-algorithm

paulirish.github.io/lh-scorecalc/

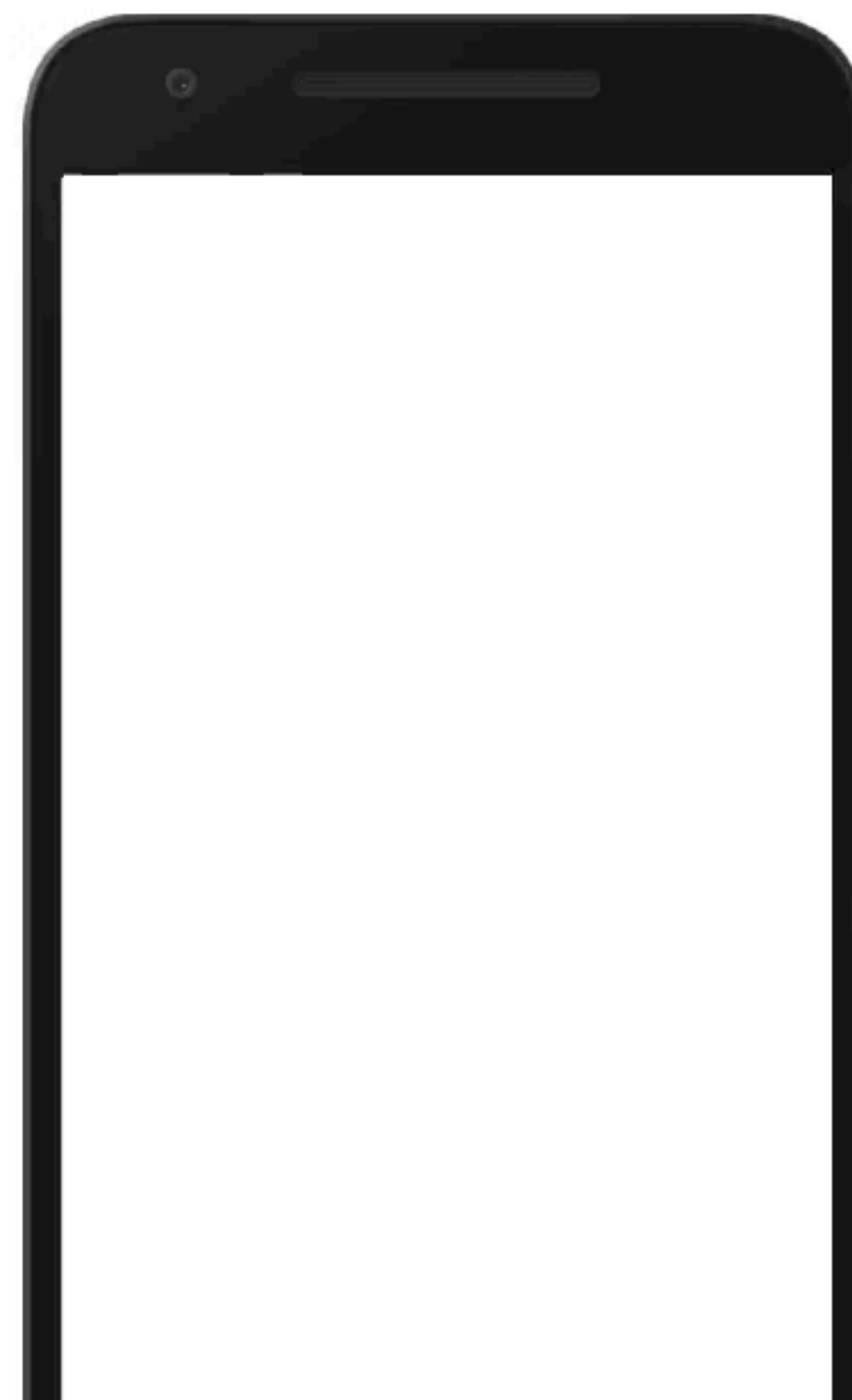


www.youtube.com/watch?v=Lx1cYJAVnzA

0_s 00

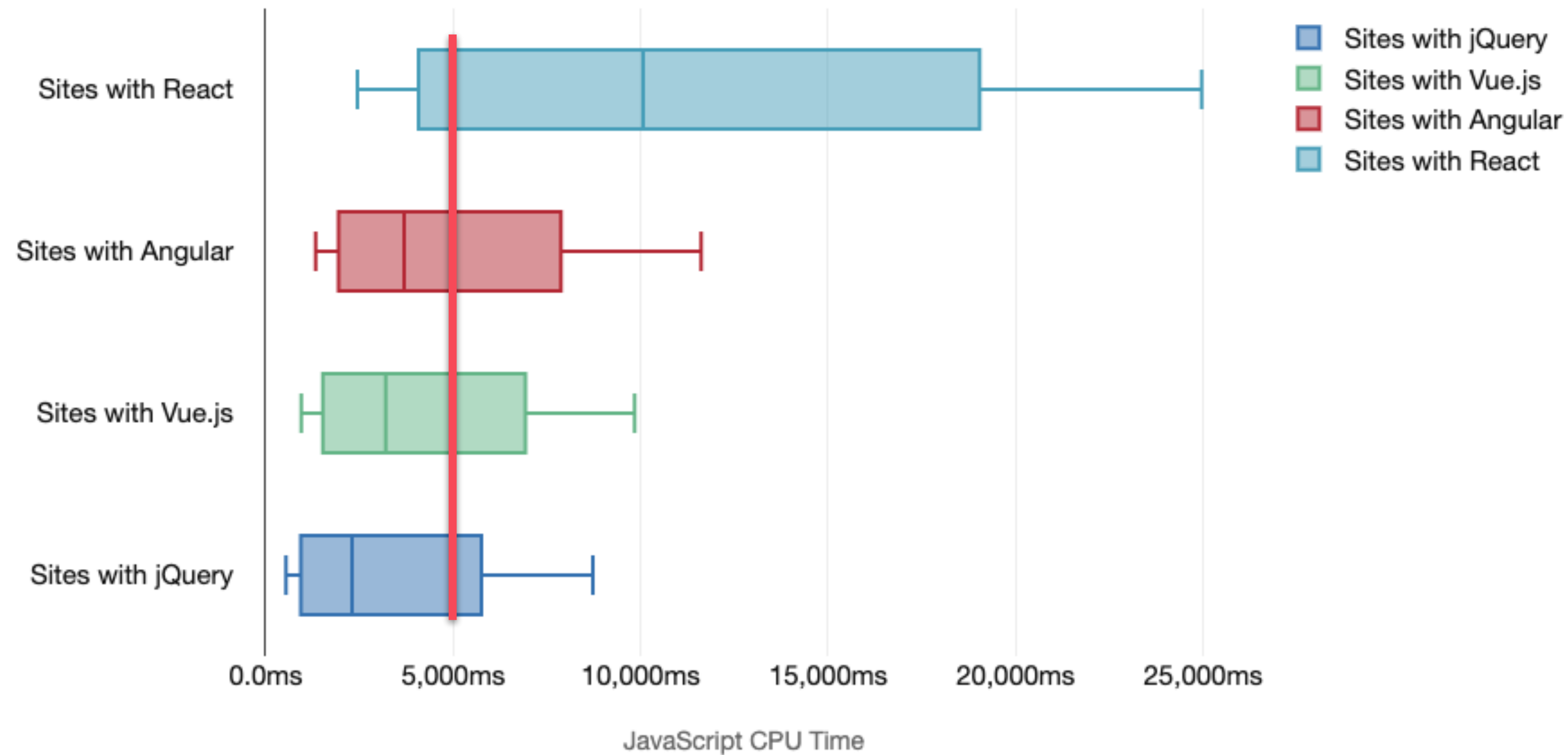


0_s 00



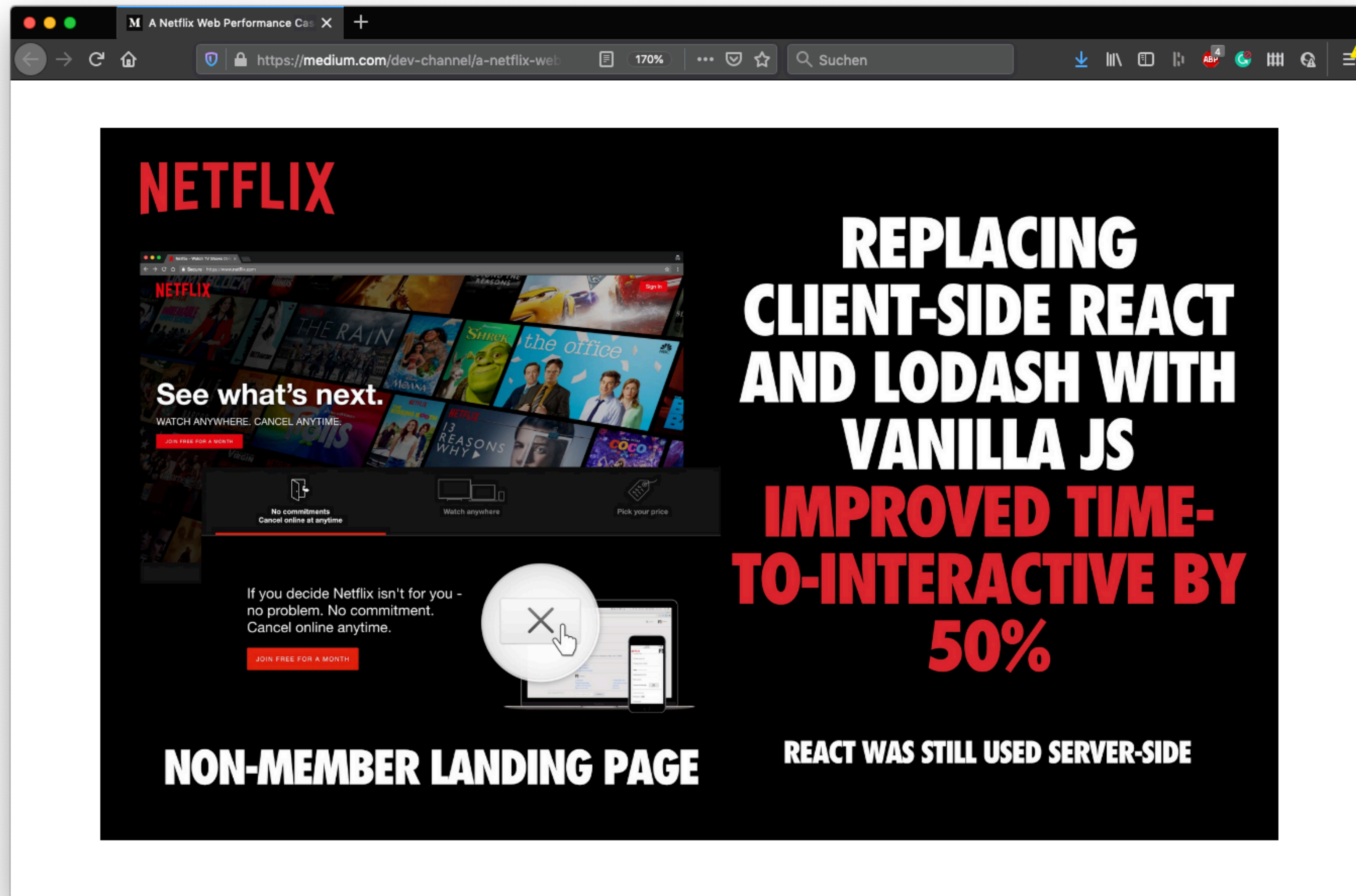


timkadlec.com/remembers/2020-04-21-the-cost-of-javascript-frameworks/



Scripting related CPU time (in milliseconds) for mobile devices in percentiles

medium.com/dev-channel/a-netflix-web-performance-case-study-c0bcde26a9d9





**A 150KB image is not
comparable to 150KB of
gzipped JavaScript!**



**Page weight is not
equal page weight!**

[Home](#)[Blog](#)[Resources](#)[Talks](#)[Smalltalk](#)[Today I learned](#)

Heyo, I'm Stefan! I write and speak about web technology.

Blog

Feb 03 2020

Monthly Digest January 2020

My favorite content of January 2020 – enjoy!

Newsletter

Jan 04 2020

Monthly Digest December 2019

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Dec 05 2019

Monthly Digest November 2019

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Today I learned

Mar 01 2020

button elements offer attributes to change form behavior

HTML

Feb 26 2020

How to quickly fail bash scripts using set

Bash

Feb 14 2020

requestSubmit offers a way to validate a form before submitting it

JavaScript

HTML

Feb 05 2020

The macOS screenshot area is draggable

macOS

Popular posts

May 06 2018

Non-capturing groups in regular expressions

JavaScript

//gi Regular Expressions

Mar 18 2018

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CSS

Jul 04 2019

"It's all about the buffers" with Mudit Ameta

Tools

Latest talks

Regular Expressions – my secret love

([Slides](#) / [Recording](#))

//gi Regular Expressions

JavaScript

Write a Function ([Slides](#) / [Recording](#))

JavaScript

Serverless

Static Sites

React in a worker, worker, worker...

([Slides](#) / [Recording](#))

JavaScript

HTTP headers for the responsible developer

([Slides](#) / [Recording](#))

Performance

Web



Get the latest content right in your inbox ...

([View past newsletters](#))

Email address

janedoe@example.com



Subscribe

OR

... say Hi somewhere in the internet!



Twitter



Git-Hub



Instagram

That's a 340KB index file for roughly 400 words, Stefan?



Some Person

@somePerson

Antwort an [@stefanjudis](#) und [@calibreapp](#)

300 KB HTML? WTH is in your page? 🤯🤯🤯

[Tweet übersetzen](#)

1:53 vorm. · 17. Apr. 2018 aus [Berlin, Deutschland](#) · [Twitter for Android](#)



Stefan Judis @stefanjudis · 17. Apr. 2018

Inlined resources for fast first paint. :)



1



Stefan Judis @stefanjudis · 17. Apr. 2018

http2 is enabled but as long as http2 push digests are not ready yet inlining and preload are the faster and more cache friendly way to go.

What is fair is that there is data in the page that's used for further navigations but yeah I take that for instand navigation. :)



1



Stefan Judis
@stefanjudis

Antwort an [@somePerson](#) und [@calibreapp](#)

I couldn't agree more that the visitor matters, but we're talking about 90KB gzipped here and an overall optimized site with almost instant in navigation.

This is a better and more lightweight experience than most of the stuff out there. :)

[Tweet übersetzen](#)

8:45 vorm. · 17. Apr. 2018 · [Twitter Web Client](#)



**"It's great because it's fast! And
it's still lighter than the rest of
the internet..."**



A faded background image of a Twitter post by Stefan Judis (@stefanjudis) from April 17, 2018. The tweet discusses 'Inlined resources for fast first paint' and mentions 'http2 is enabled but as long as http2 push digests are not ready yet'. It also notes that 'http2 push digests are the faster and more cache friendly way to go' and mentions 'What is fair is that there is data in the page that's used for further navigations but yeah I take that for instand navigation. :)'. The tweet has 1 reply and 1 retweet.

~~"It's great because it's still lighter than the rest of the internet..."~~



A faded background image of a Twitter post by Stefan Judis (@stefanjudis) from April 17, 2018. The tweet discusses 'we're talking about 90KB gzipped' and 'an over optimized site with almost instant in navigation'. It also mentions 'This is a better and more lightweight experience than most of the other sites out there :)'. The tweet has 1 reply and 1 retweet.

"I'm really digging the tech-stack!"

Tweet übersetzen
8:45 vorm. · 17. Apr. 2018 · Twitter Web Client

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(Slides / Recording)

//giRegular ExpressionsJavaScript

Write a Function

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JavaScriptServerlessStatic Sites

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PerformanceWeb



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([View past newsletters](#))

Email address

Subscribe

OR

... say Hi somewhere in the internet!



Twitter



Git-Hub



Instagram

That's a 340KB index file for roughly 400 words, Stefan?

```
window.__DATA__=function(
  e,t,n,o,i,/ * . . . */
){ return /* . . . */ }
```




**I decided to preload/inline
22 articles ...
(at an average session length of 1.17 pages)**



**... for "better
performance".**



**Making a very fast
website is extremely hard!**



**Making a very fast
website is extremely hard!**
(But is it really?)



twitter.com/philhawsworth/status/1038440732741259265



Phil Hawsworth
@philhawsworth



A few people have asked me what I did to make this so fast.

The answer is: nothing.
I just didn't add anything to make it slow.

I kept it simple.
The pages are pre-rendered.
The CSS is inlined.

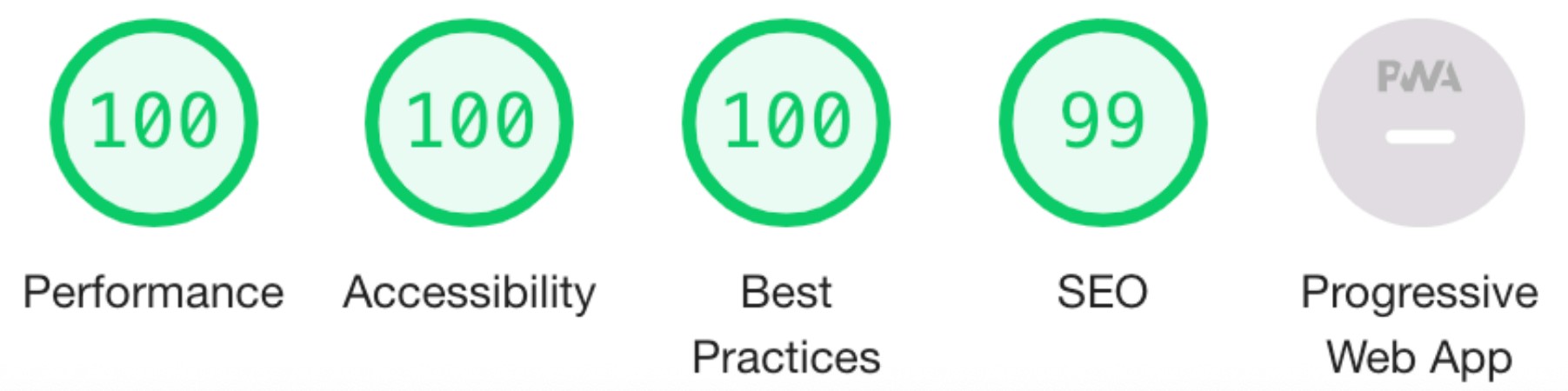
I didn't add unnecessary JavaScript.


The work was done before you got there.

[Tweet übersetzen](#)

4:55 nachm. · 8. Sep. 2018 · [Twitter Web Client](#)

11 Retweets 55 „Gefällt mir“-Angaben



Tiny helpers

A collection of free single-purpose online tools for web developers...

Tags

All167

Accessibility10

Animations3

APIs6

Code10

Color21

Command line3

CSS34

Data transformation9

Database1

Follow on Twitter

Follow RSS

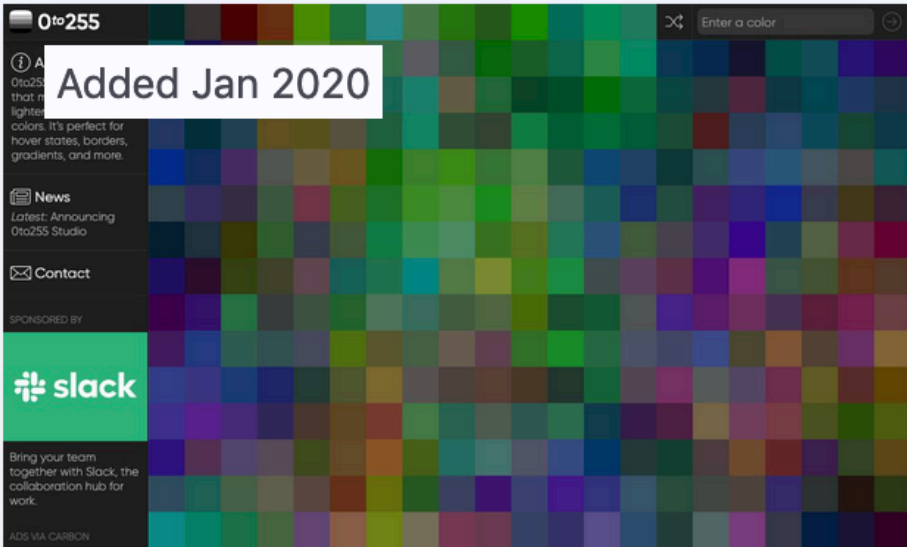
Add helper

All tools

Sort by name

Sort by date

Added Jan 2020




Oto255

Color

Lighten and darken colors easily

Added Feb 2020




2QR

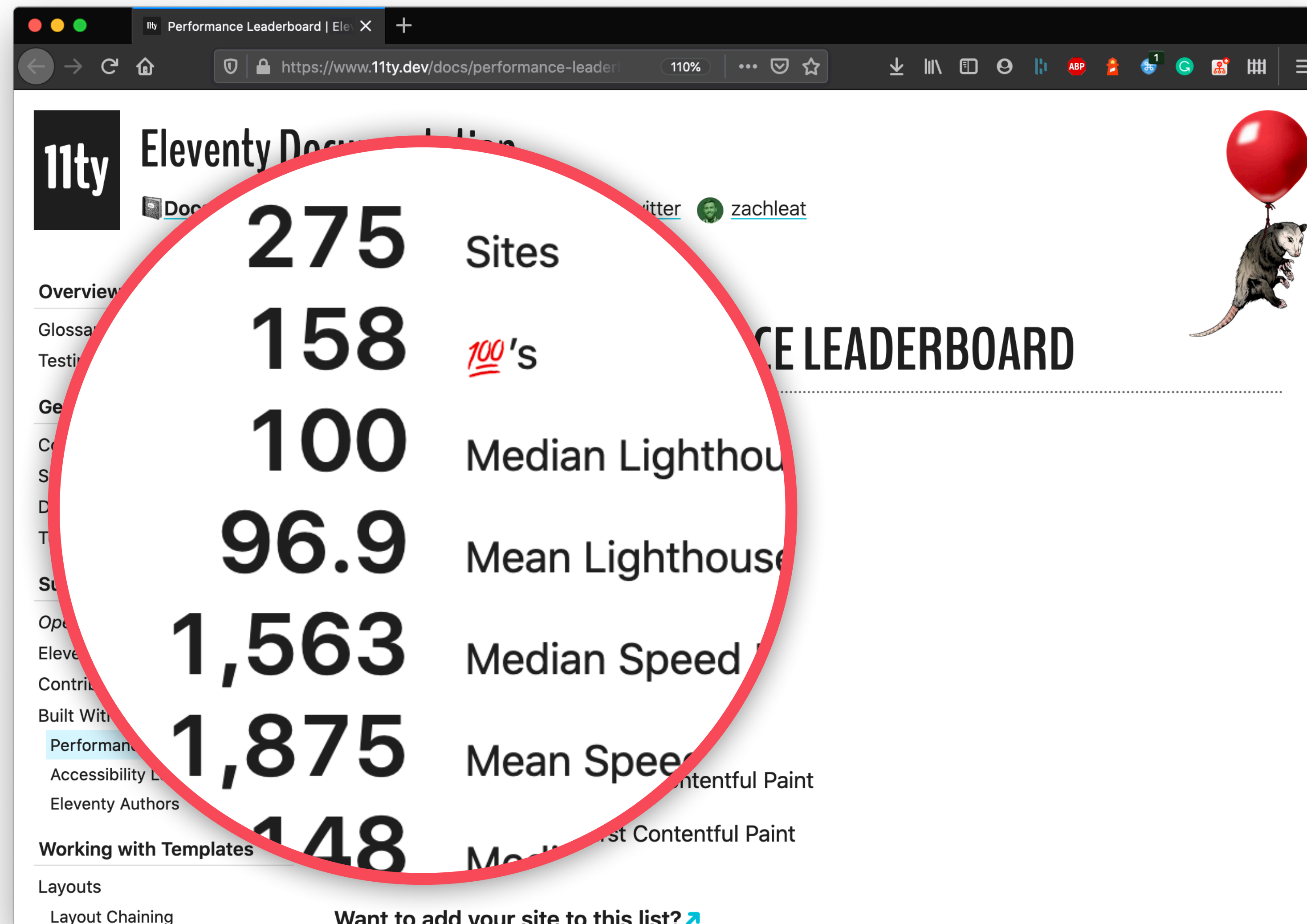
Misc

Create QR codes with one click, using the URL, a bookmarklet or direct input

Made by



www.11ty.dev/docs/performance-leaderboard/

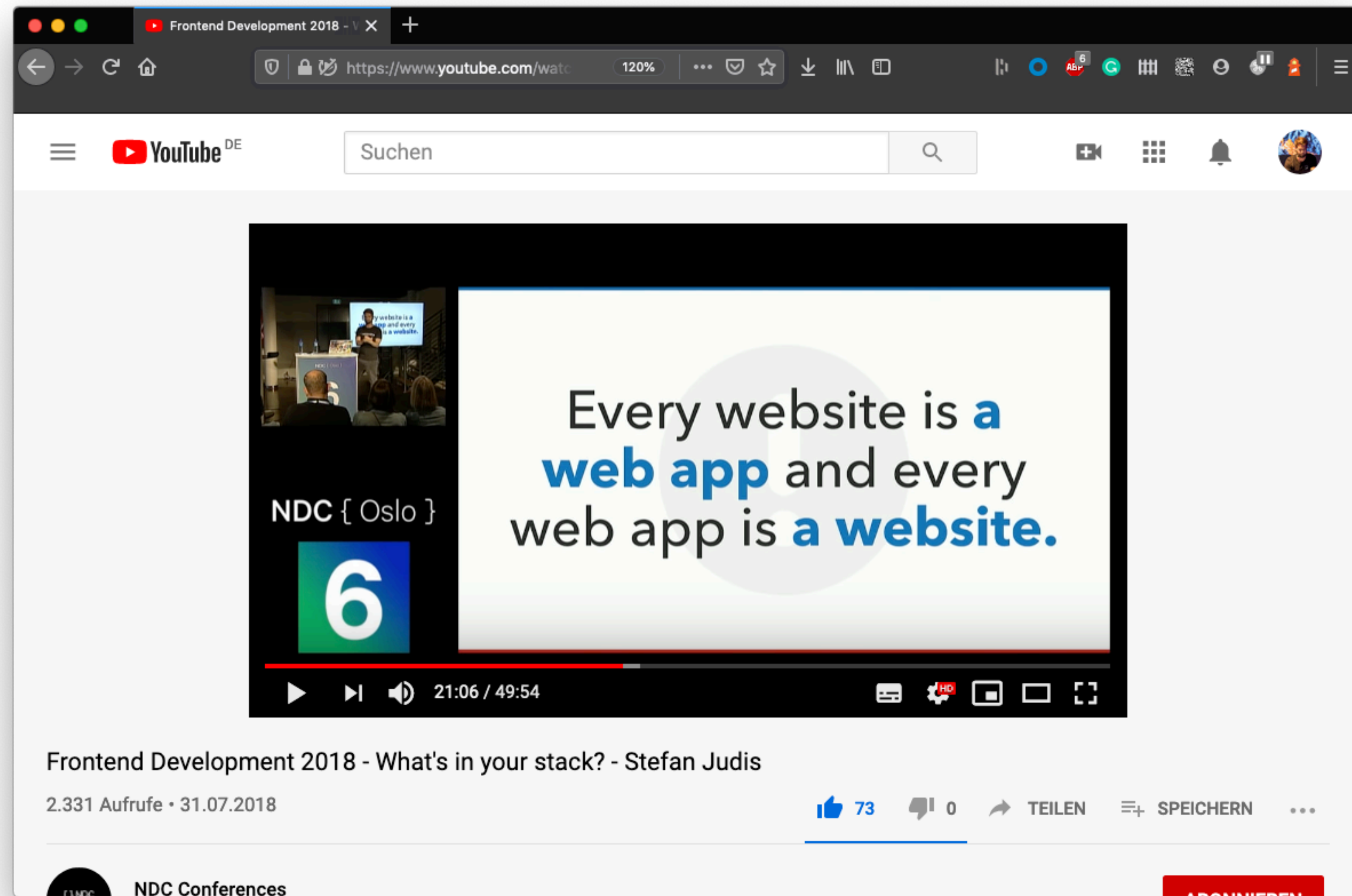


The screenshot shows the 11ty Performance Leaderboard page. A red circle highlights the following statistics:

Value	Metric
275	Sites
158	<u>100</u> 's
100	Median Lighthouse
96.9	Mean Lighthouse
1,563	Median Speed Index
1,875	Mean Speed Index
148	Median First Contentful Paint

Other visible elements include the 11ty logo, the title "Eleventy Documentation", a Twitter link for zachleat, a red balloon with a cat, and a sidebar with links like Overview, Glossary, Testing, Getting Started, and Working with Templates.

www.youtube.com/watch?v=88K8oO_dYbl



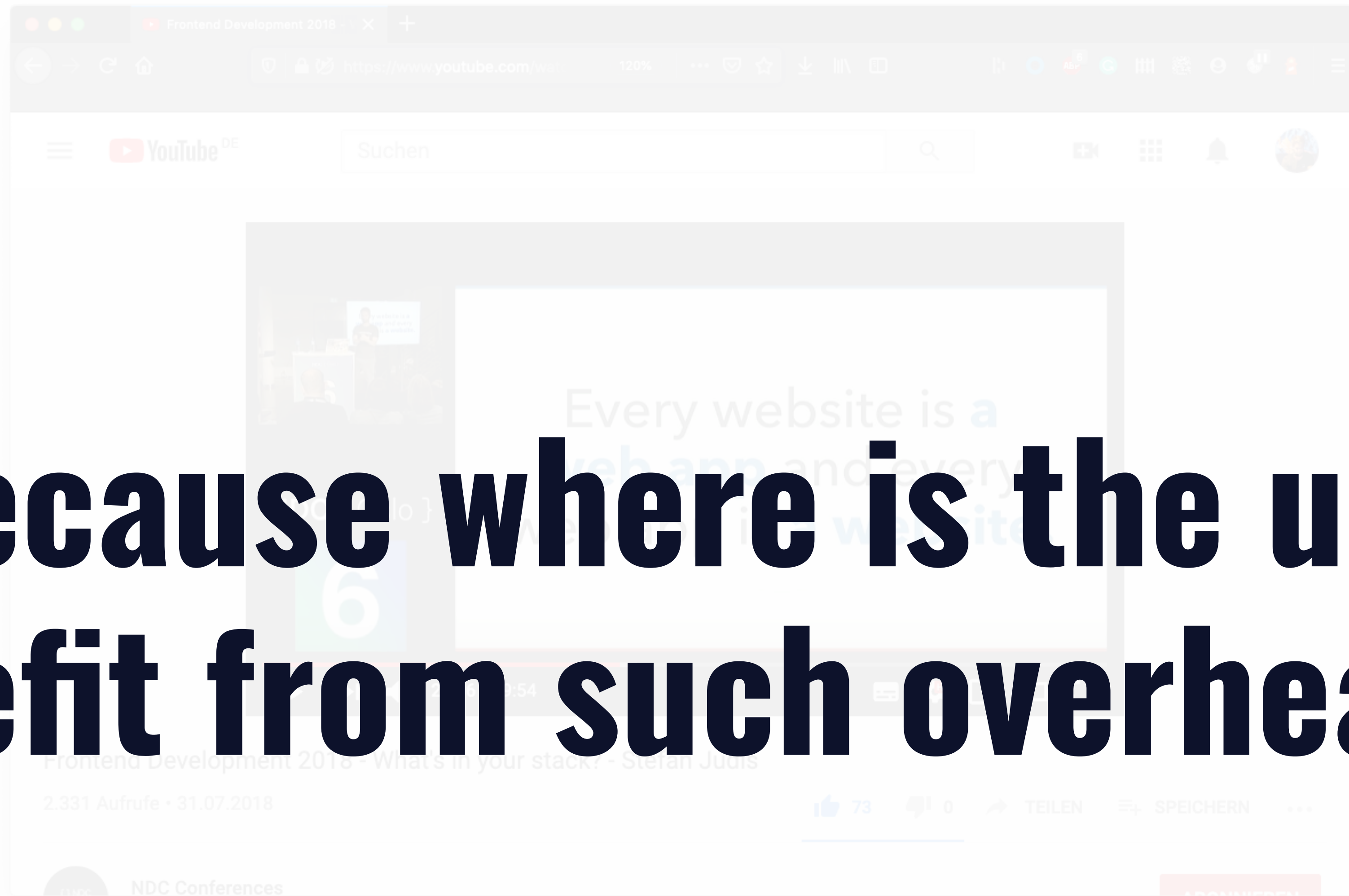
www.youtube.com/watch?v=88K8oO_dYbl

**Today, I 100% disagree
with "past me", ...**



www.youtube.com/watch?v=88K8oO_dYbl

... because where is the user's benefit from such overhead?





A common "best practice"

**Universal JavaScript apps for
content-sites**



```
<!doctype html>
<html lang="">

<head>
  <meta charset="utf-8">
  <title></title>
  <meta name="description" content="">
  <meta name="viewport" content="width=device-width, initial-scale=1">

  <link rel="manifest" href="site.webmanifest">
  <link rel="apple-touch-icon" href="icon.png">
  <link rel="stylesheet" href="css/main.css">

  <meta name="theme-color" content="#fafafa">
</head>

<body>
  <p>Hello world!</p>
  <script src="js/plugins.js"></script>
  <script src="js/main.js"></script>
</body>
</html>
```



```
<!doctype html>
<html lang="">

<head>
  <meta charset="utf-8">
  <title></title>
  <meta name="description" content="">
  <meta name="viewport" content="width=device-width, initial-scale=1">

  <link rel="manifest" href="site.webmanifest">
  <link rel="apple-touch-icon" href="icon.png">
  <link rel="stylesheet" href="css/main.css">

  <meta name="theme-color" content="#fafafa">
</head>

<body>
  <p>Hello world!</p>
  <script src="js/app-bundle-hash1.js"></script>
  <script src="js/app-bundle-hash2.js"></script>
  <script src="js/app-bundle-hash3.js"></script>
  <script>window.__data__ = { greeting: "Hello world!" }</script>
</body>
</html>
```



```
<!doctype html>
<html lang="">

<head>
  <meta charset="utf-8">
  <title></title>
  <meta name="description" content="">
  <meta name="viewport" content="width=device-width, initial-scale=1">

  <link rel="manifest" href="site.webmanifest">
  <link rel="apple-touch-icon" href="icon.png">
  <link rel="stylesheet" href="css/main.css">
  <meta name="theme-color" content="#fafafa">
</head>

<body>
  <h1>Hello world!</h1>
  <script src="/main.js"></script>
  <script src="/main.js"></script>
  <script>window.__data__ = { greeting: "Hello world!" }</script>
</body>
</html>
```

The same code runs on the server and on the client!



Your content in HTML

HomeBlogResourcesTalksSmalltalkToday I learned✉️🐦📡

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button elements offer attributes to change form behavior

📄 HTML

Feb 26 2020

How to quickly fail bash scripts using set

📄 Bash

Feb 14 2020

requestSubmit offers a way to validate a form before submitting it

📄 JavaScript 📄 HTML

Feb 05 2020

The macOS screenshot area is draggable

🍏 macOS

Popular posts

May 06 2018

Non-capturing groups in regular expressions

📄 JavaScript //👉 Regular Expressions

Mar 18 2018

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🌱 Node.js

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🗣️ Accessibility

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🔗 Tools

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🔗 Tools 📖 CSS

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🔗 Tools

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//👉 Regular Expressions 📄 JavaScript

Write a Function (Slides / Recording)

📄 JavaScript 🔄 Serverless

Static Sites

React in a worker, worker, worker... (Slides / Recording)

📄 JavaScript

HTTP headers for the responsible developer (Slides / Recording)

🔗 Performance 🌐 Web

✉️

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(View past newsletters)

Email address

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OR

... say Hi somewhere in the internet!

🐦 Twitter 🔄 GitHub 📷 Instagram

This page is built with the CNN stack (Contentful, Next & Netlify) and loaded in 1.925s. © 2019 Copyright Stefan Judis. All rights reserved.

The same content in JavaScript

HomeBlogResourcesTalksSmalltalkToday I learned✉️🐦📡

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My favorite content of November 2019 – enjoy!

✉️ Newsletter

Today I learned

Mar 01 2020

button elements offer attributes to change form behavior

📄 HTML

Feb 26 2020

How to quickly fail bash scripts using set

📄 Bash

Feb 14 2020

requestSubmit offers a way to validate a form before submitting it

📄 JavaScript 📄 HTML

Feb 05 2020

The macOS screenshot area is draggable

🍏 macOS

Popular posts

May 06 2018

Non-capturing groups in regular expressions

📄 JavaScript //👉 Regular Expressions

Mar 18 2018

lookaheads (and lookbehinds) in JavaScript regular expressions

📄 JavaScript //👉 Regular Expressions

Feb 09 2018

Node.js sends warnings when you add too many listeners to an event emitter

🌱 Node.js

Oct 24 2016

aria-selected – when (not) to use it

🗣️ Accessibility

Projects

tiny-helpers.dev

A collection of free single-purpose online tools for web developers

🔗 Tools

CSS Scroll shadows

A tool to create CSS scroll shadows quickly.

📖 CSS 🔄 Serverless

Performance Tooling Today

A searchable resource collection all about web performance including articles, talks, slides and more...

🔗 Performance

Developer Smalltalk

Jan 15 2020

How to import API data in Google Sheets and visualize it in Google Data Studio

🔗 Tools

Aug 07 2019

"Org mode is plain text on steroids" with Mudit Ameta

🔗 Tools 📖 CSS

Jul 23 2019

Easier designers & developers collaboration using visbug with Adam Argyle

🔗 Tools 📖 CSS

Jul 04 2019

"It's all about the buffers" with Mudit Ameta

🔗 Tools

Latest talks

Regular Expressions – my secret love (Slides / Recording)

//👉 Regular Expressions 📄 JavaScript

Write a Function (Slides / Recording)

📄 JavaScript 🔄 Serverless

Static Sites

React in a worker, worker, worker... (Slides / Recording)

📄 JavaScript

HTTP headers for the responsible developer (Slides / Recording)

🔗 Performance 🌐 Web

✉️

Get the latest content right in your inbox ...

(View past newsletters)

Email address

janedoe@example.com

Subscribe

OR

... say Hi somewhere in the internet!

🐦 Twitter 🔄 GitHub 📷 Instagram

This page is built with the CNN stack (Contentful, Next & Netlify) and loaded in 1.925s. © 2019 Copyright Stefan Judis. All rights reserved.



**Is this really
the best way for the user?**

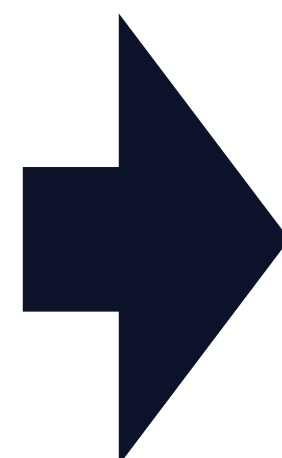


**"This architecture offers doors
to progressive enhancement!"**

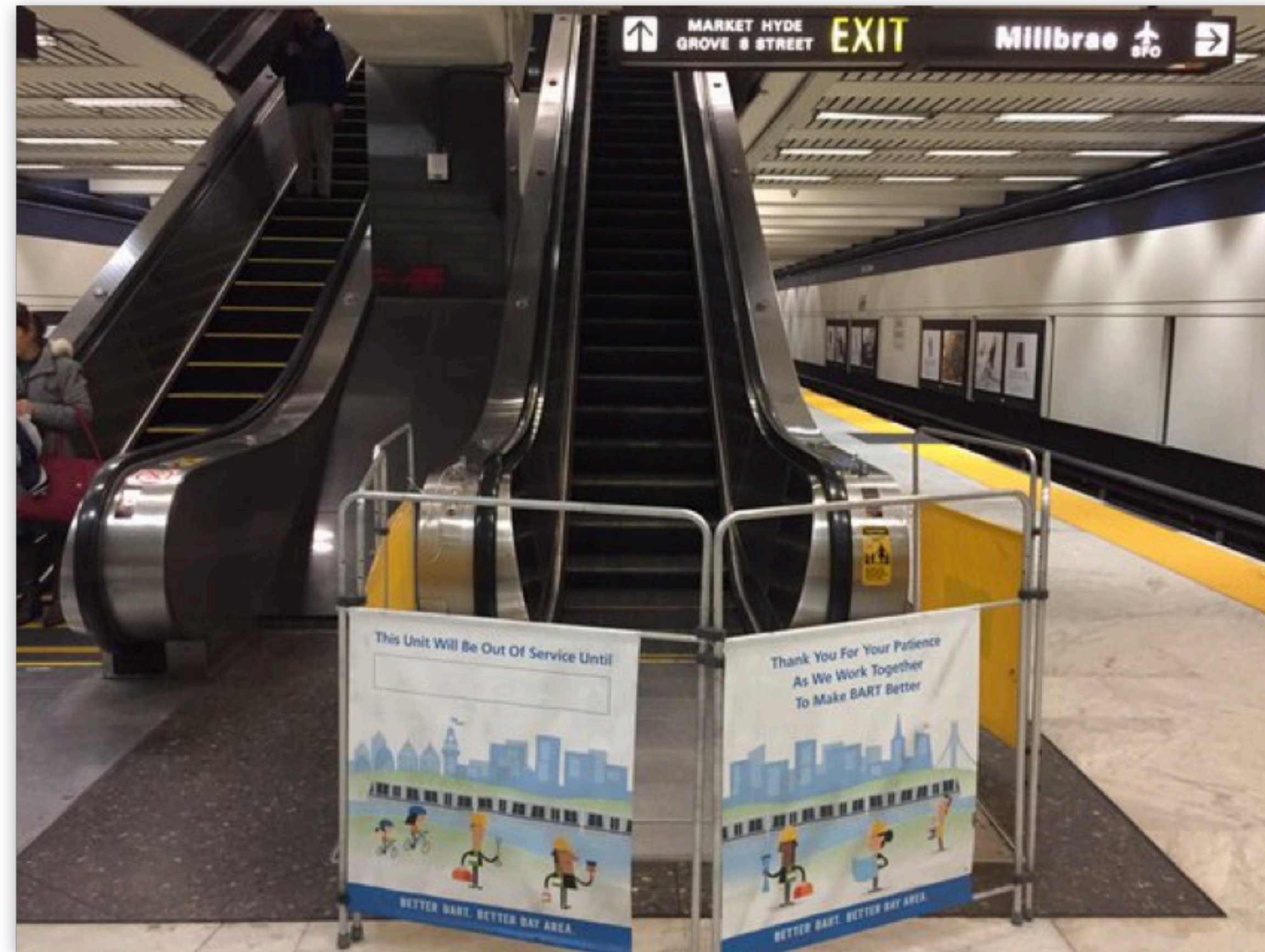


Base functionality

Enhanced experience



If the enhancement fails, it still works!





Search result for "css" | Performance Tooling Today

Not Secure | perf-tooling.today/tools?q=

START

TOOLS

ARTICLES

VIDEOS

SLIDES

BOOKS

COURSES

AUDITS

List of performance tools

Search all 183 tools

Adept

A Bash script to automate adaptive JPEG compression using common CLI tools

376★

images

compression

analyze-css

CSS selectors complexity and performance analyzer



Updated URL

Search result for "css" | Perform x +

Not Secure perf-tooling.today/tools?q=css

START TOOLS ARTICLES VIDEOS SLIDES BOOKS COURSES AUDITS

List of performance tools

analyze-css

CSS selectors complexity and performance analyzer

628☆ 15☆ 628☆

Calibre (Paid)

Continuous website quality and performance telemetry

Submittable form

Updated search results

twitter.com/philhawksworth/status/990890920672456707

13 MILLION
REQUESTS FOR JAVASCRIPT
WILL TIMEOUT

Buzzfeed



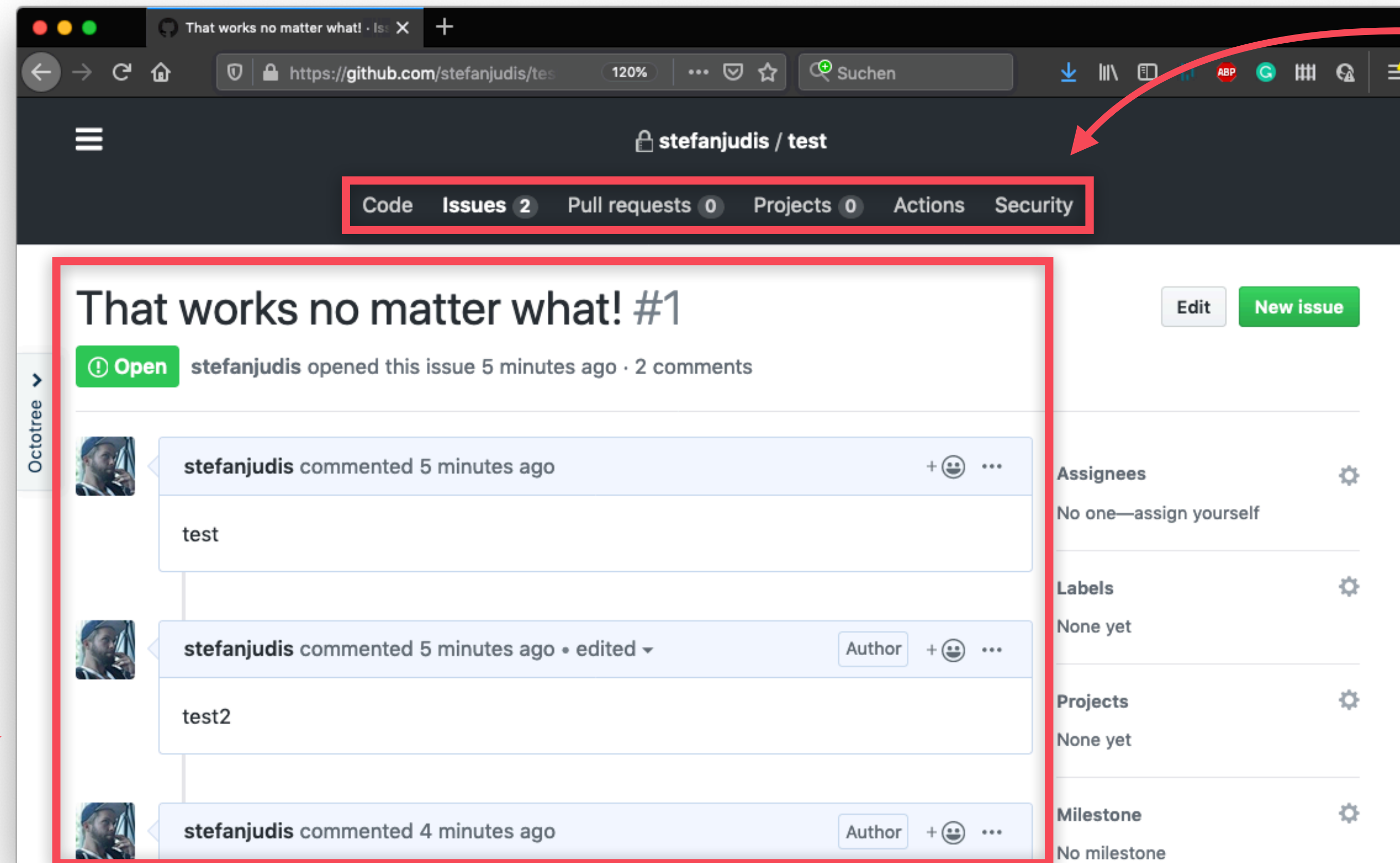


"We don't have any non-JavaScript users"
No, all your users are non-JS while
they're downloading your JS.

Jake Archibald

github.com

Five "old school"
HTML links



POST github.com/stefanjudis/test/issue_comments
handles a form and AJAX submit



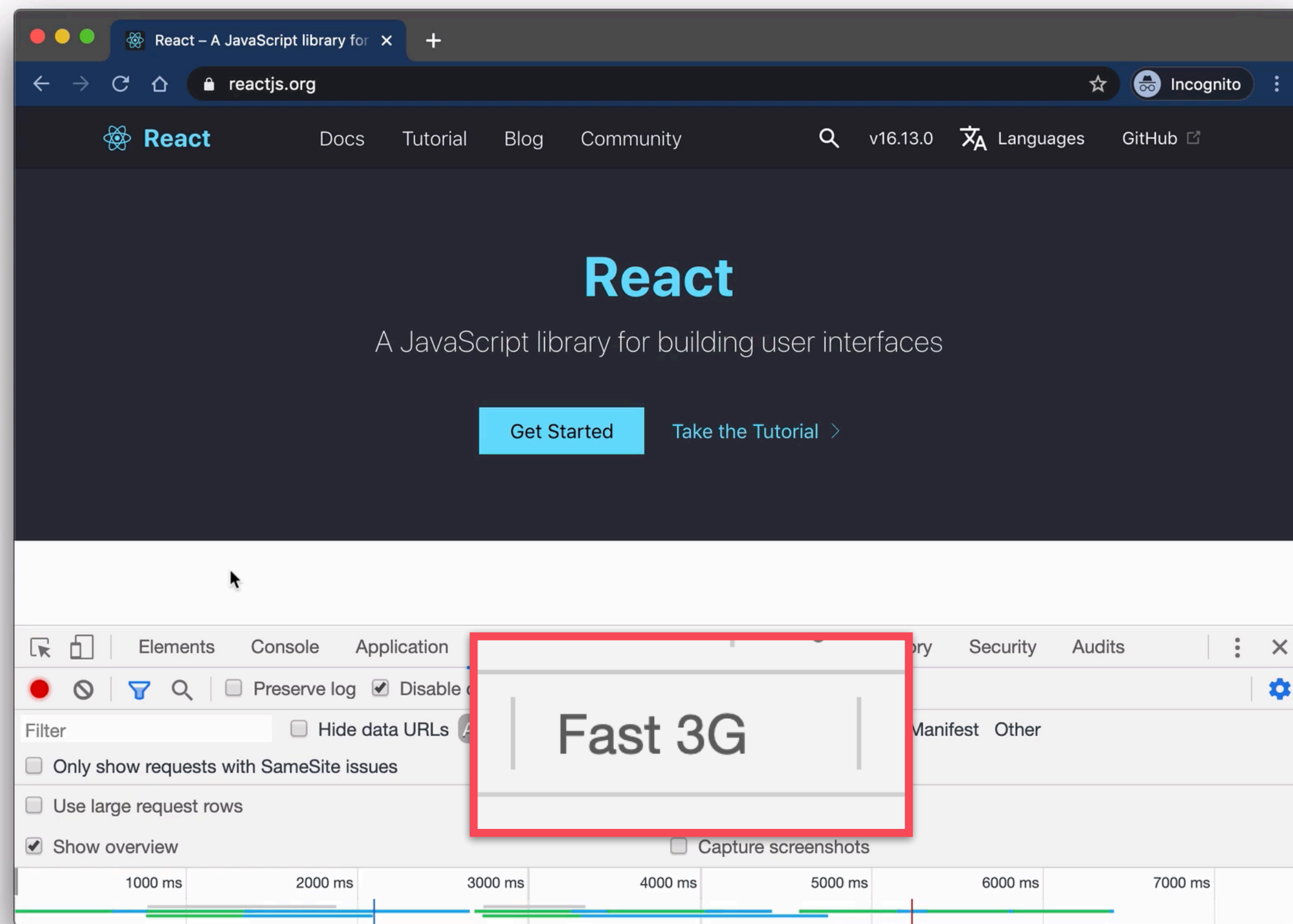
I'm happy with GitHub's experience.

A good site "just works".™

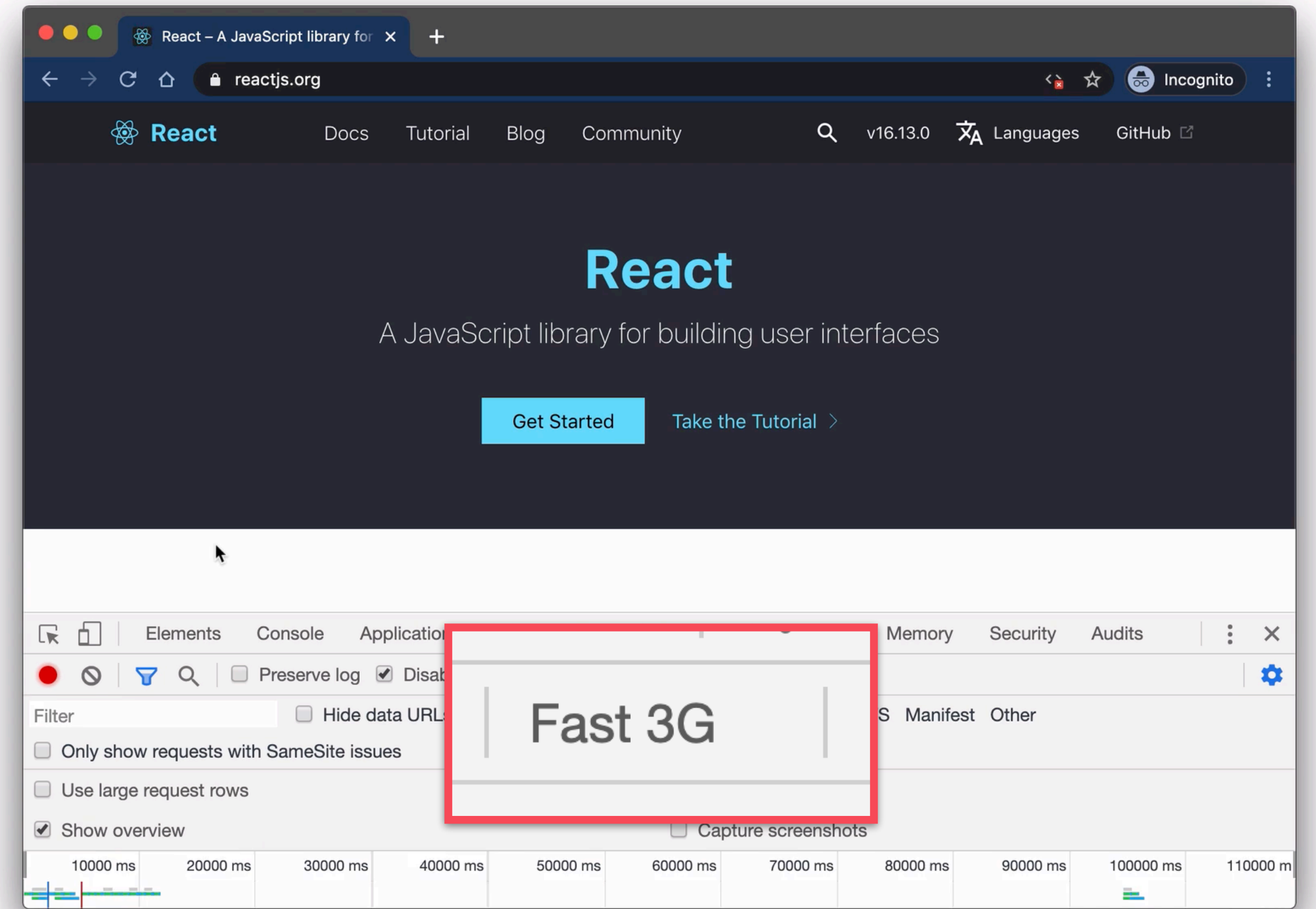


**What's the enhancement
in the wild, though?**

reactjs.org with JavaScript



reactjs.org without JavaScript



433KB / 1.1MB

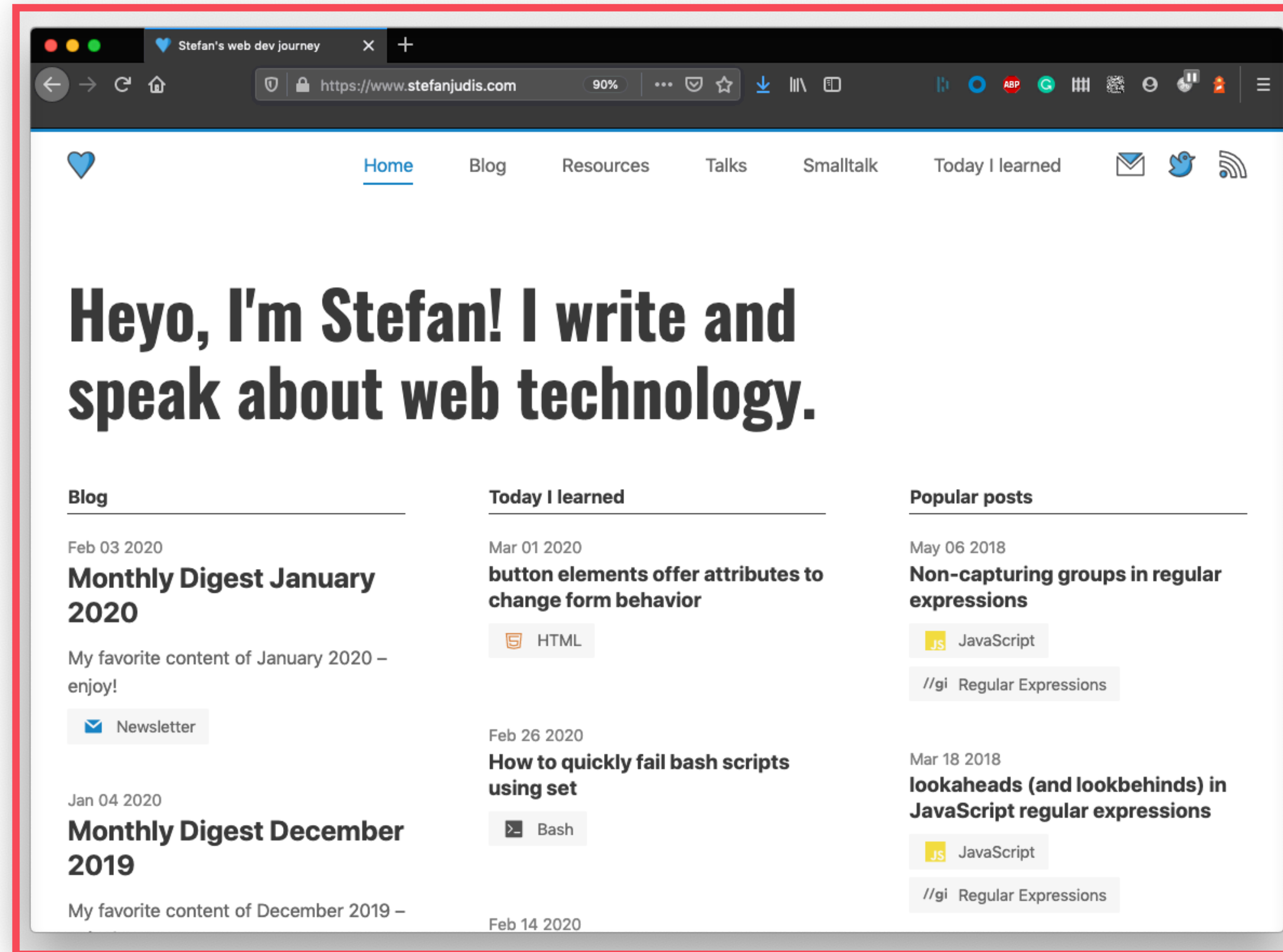
Initial weight

49KB / 175KB

547KB / 2.3MB

Weight after
4 navigations

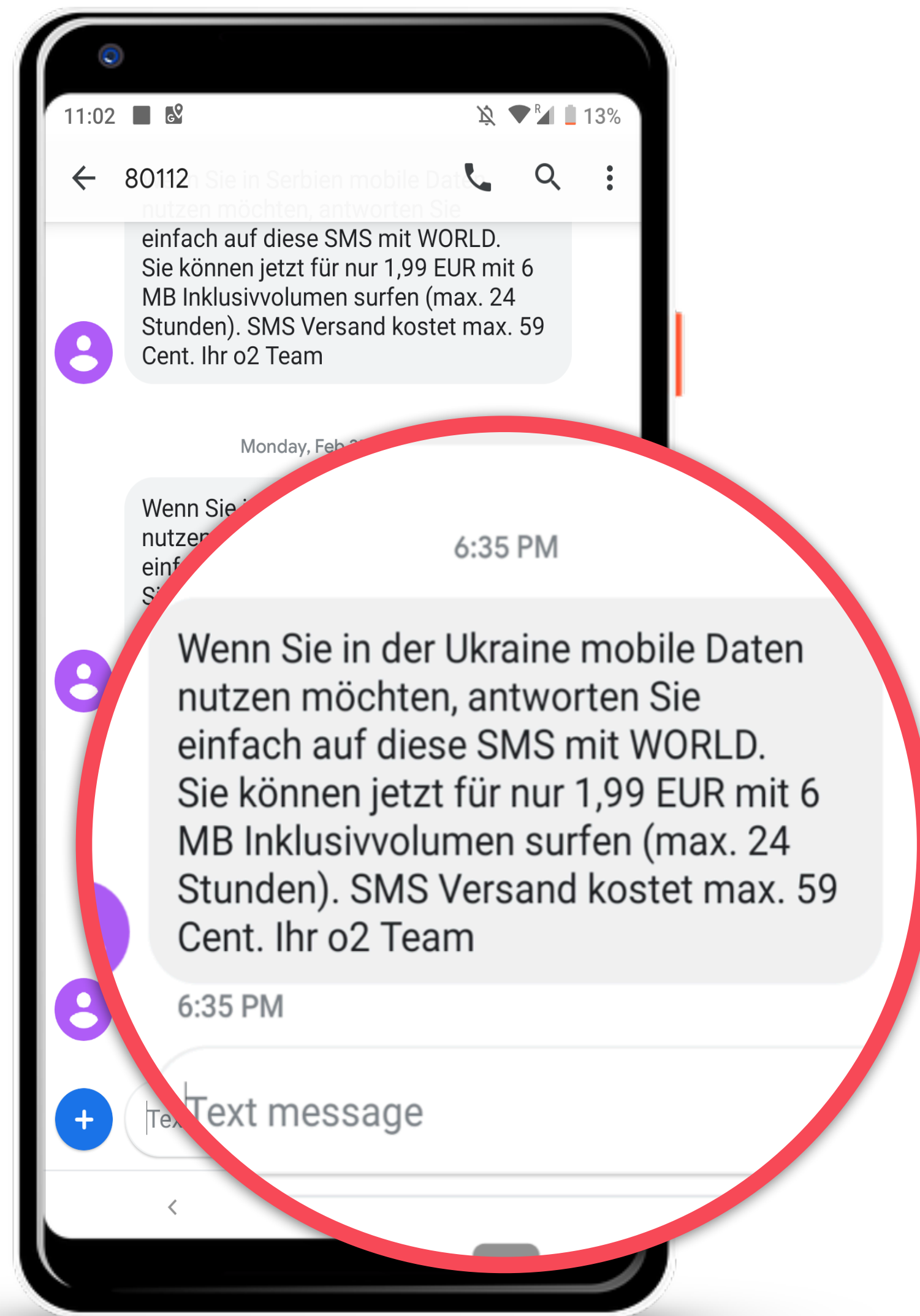
100KB / 1.0MB



I'm guilty of that, too!



**Does this architecture
improve user experience?**



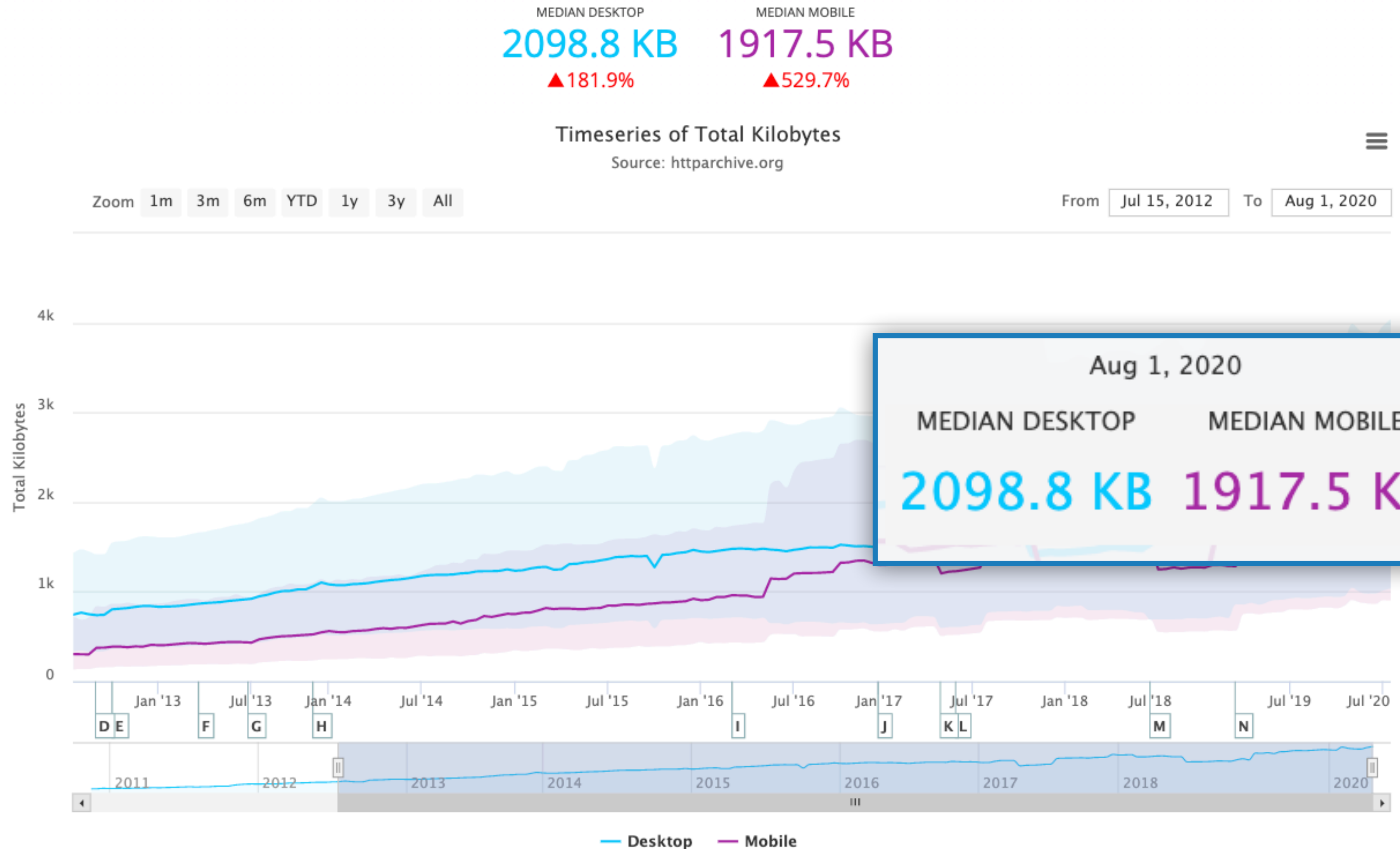


You get **6MB** for **2Euros** but
you have only **24h** to
use them! Right...



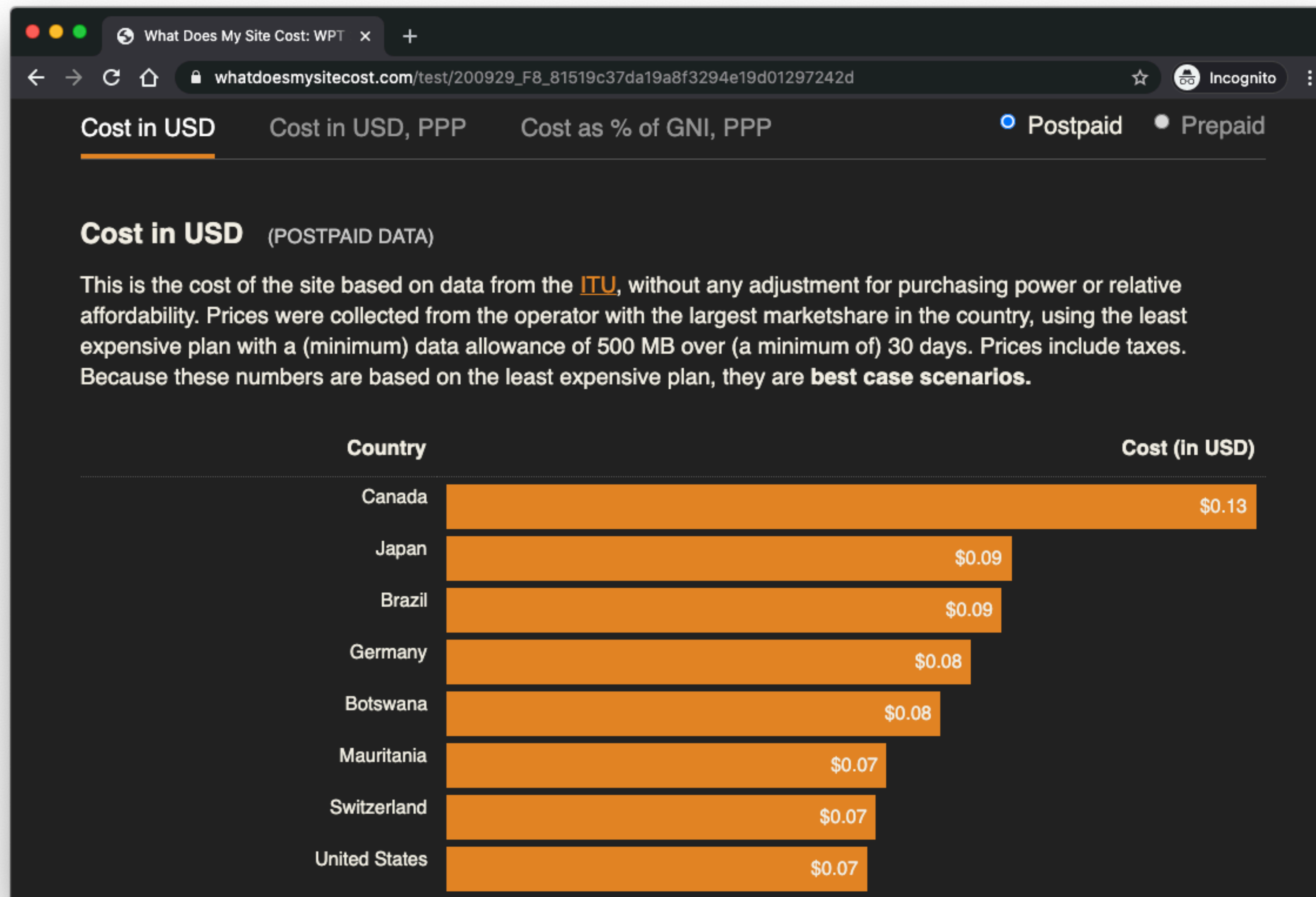


<httparchive.org/reports/state-of-the-web>





whatdoesmysitecost.com





httparchive.org/reports/state-of-the-web

MEDIAN DESKTOP
1957.8 KB
▲318.6%

MEDIAN MOBILE
1791.9 KB
▲1137.5%

Timeseries of Total Kilobytes

Source: httparchive.org

Zoom 1m 3m 6m YTD 1y 3y All

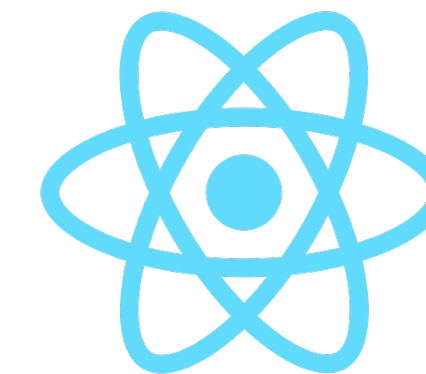
From Nov 15, 2010 To Feb 1, 2020

We ship more data for the same experience...





**Maybe app frameworks
are for apps after all?**



Facebook – log in or sign up

https://www.facebook.com/?stype=lo&jlou=AffS

Suchen

facebook

Email or phone

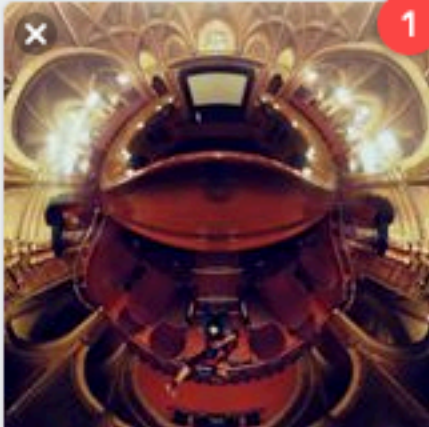
Password

Log In

Forgotten account?

Recent logins

Click your picture or add an account.





Stefan


+


Add Account


Create a new account

It's quick and easy.

First name  

Surname 

Mobile number or email address 

New password 

Birthday

12

▼

Mar

▼

1995


▼

?

Gender

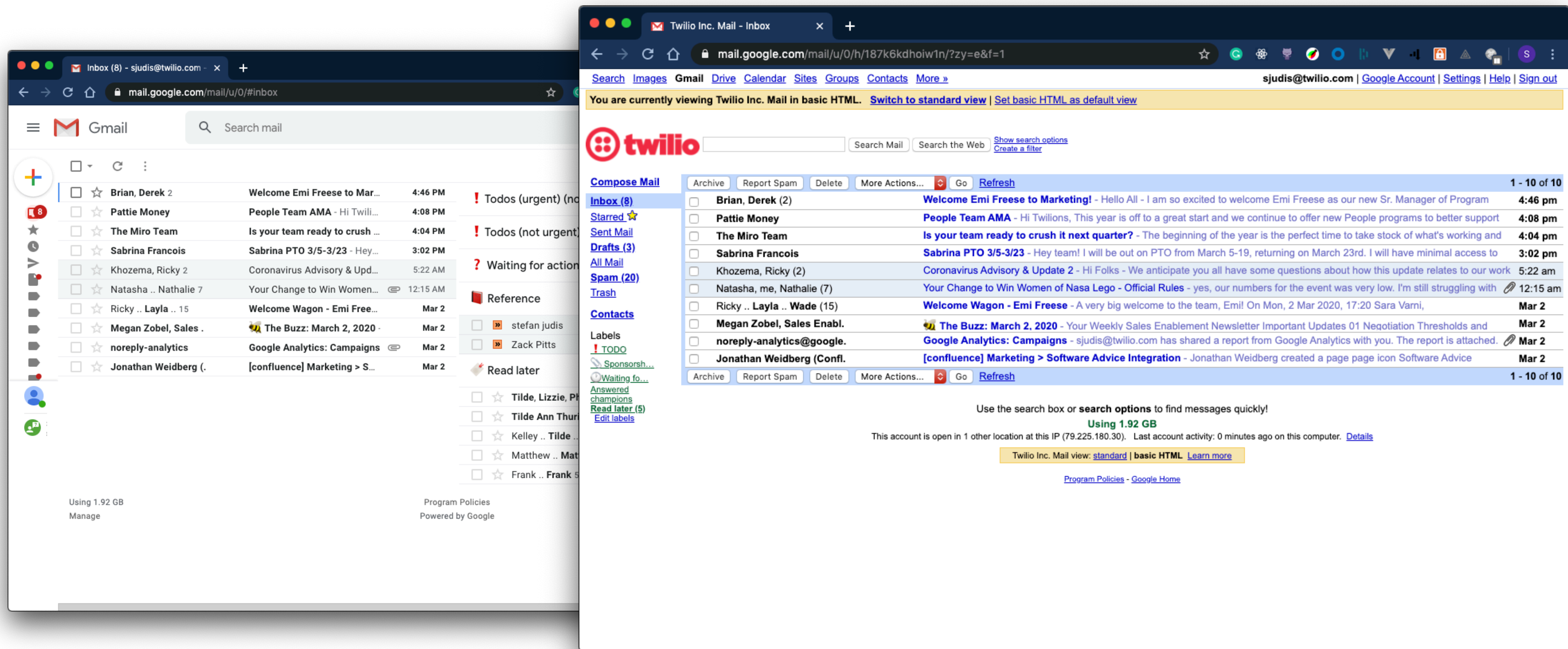
☐ Female

☐ Male

☐ Custom 

By clicking Sign Up, you agree to our [Terms](#). Learn how we collect, use and share your data in our [Data Policy](#) and how we use cookies and similar technology in our [Cookie Policy](#). You may receive SMS notifications from us and can opt out at any time.

Sign Up

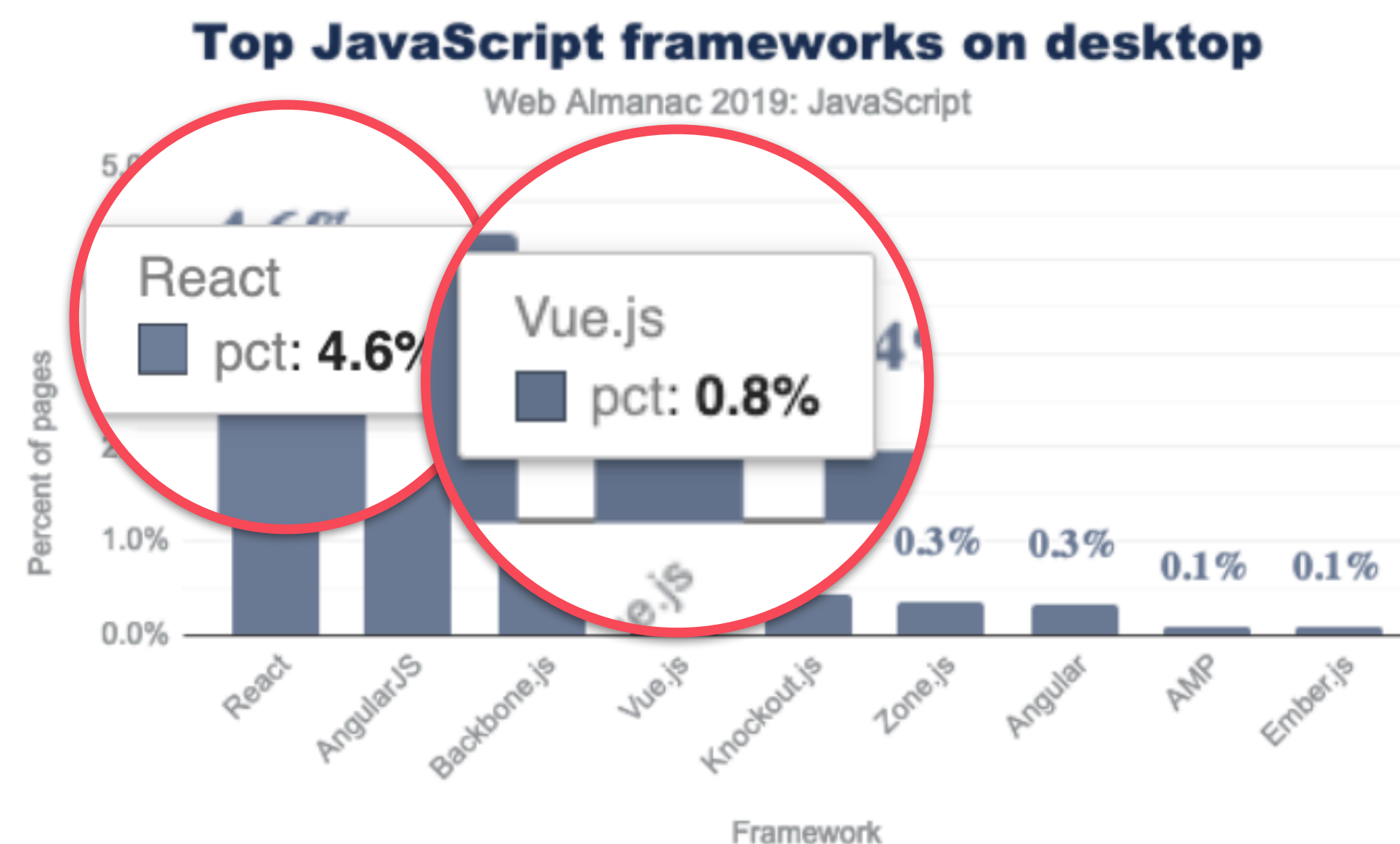


5.2MB / 17MB

25KB / 40KB



<i>Library</i>	<i>Desktop</i>	<i>Mobile</i>
jQuery	85.03%	83.46%
jQuery Migrate	31.26%	31.68%
jQuery UI	23.60%	21.75%
Modernizr	17.80%	16.76%
Fancybox	7.04%	6.61%
Lightbox	6.02%	5.93%
Slick	5.53%	5.24%
Moment.js	4.92%	4.29%





**The web is not as
cutting-edge as it seems...**



... boring is beautiful!
(and fast)



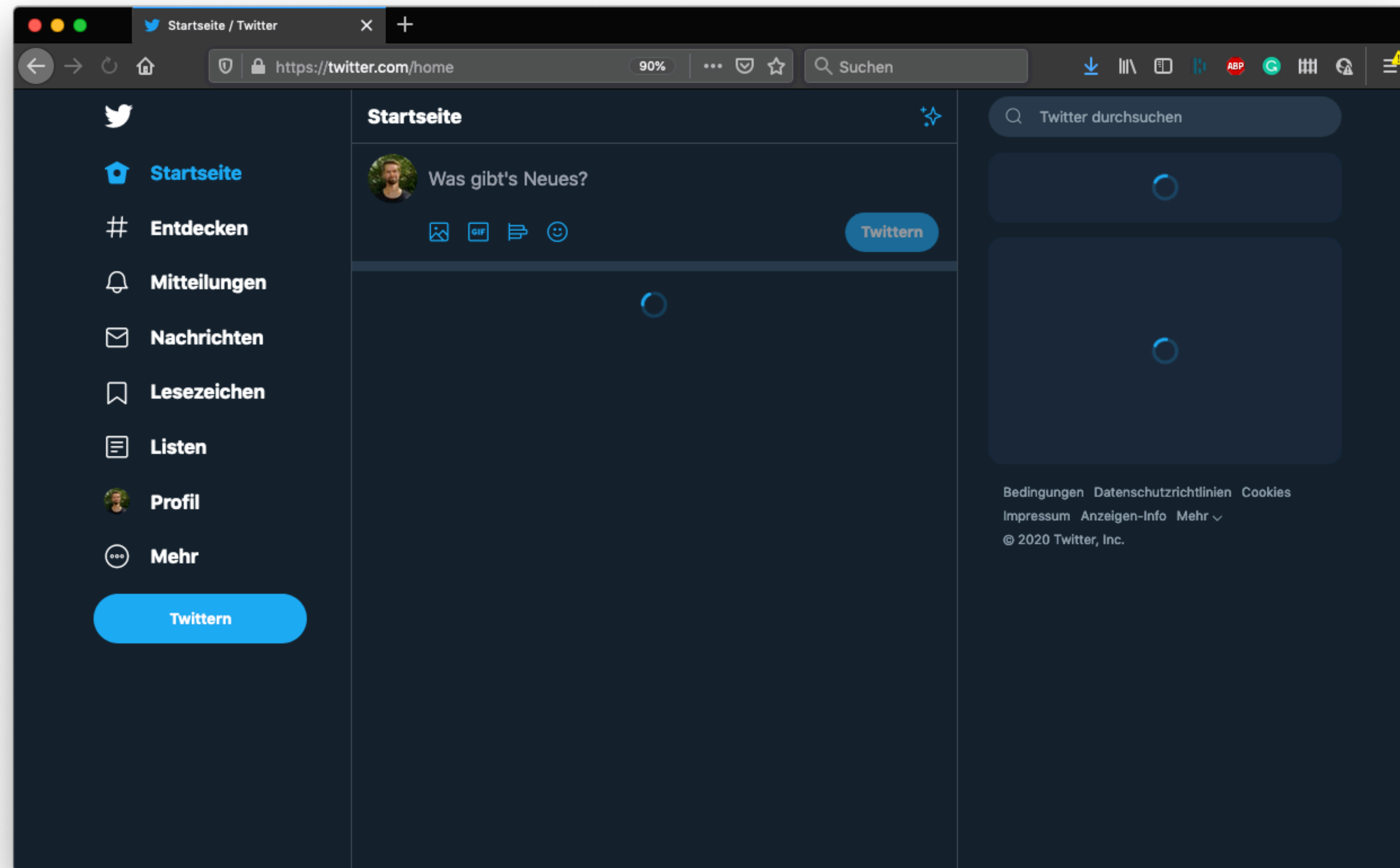
"Benefits" of client-side routing



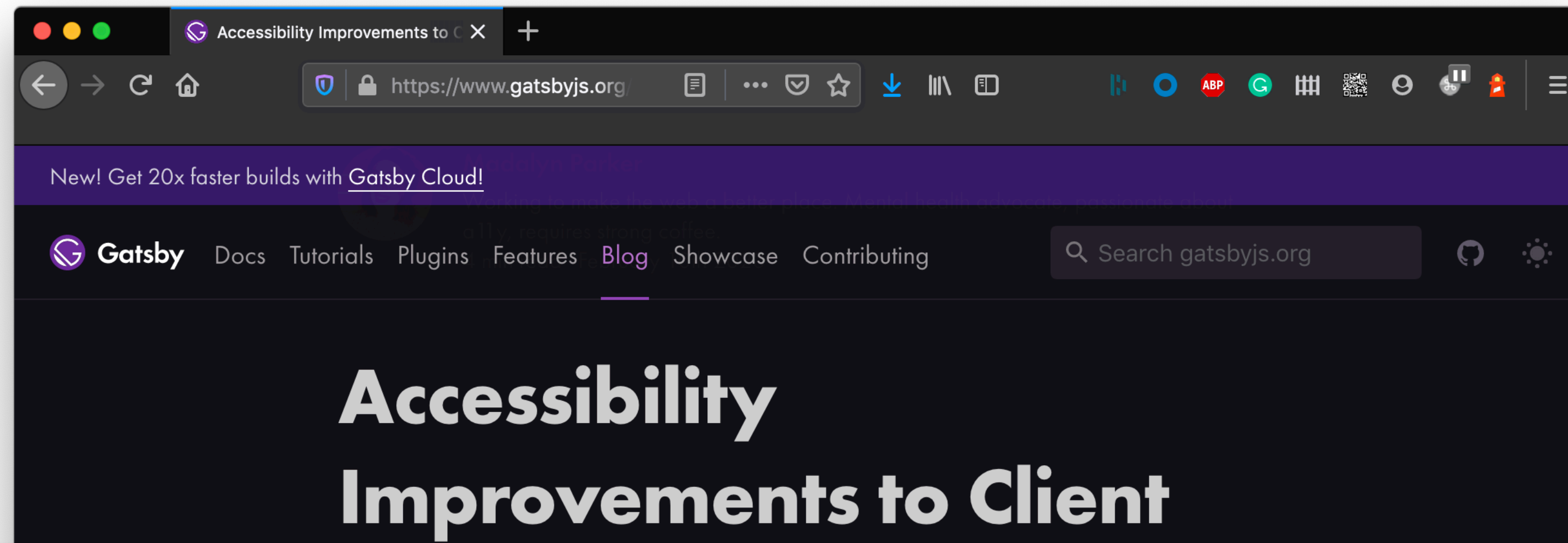
**Developers are "allowed"
to re-implement
an accessible navigation**



twitter.com

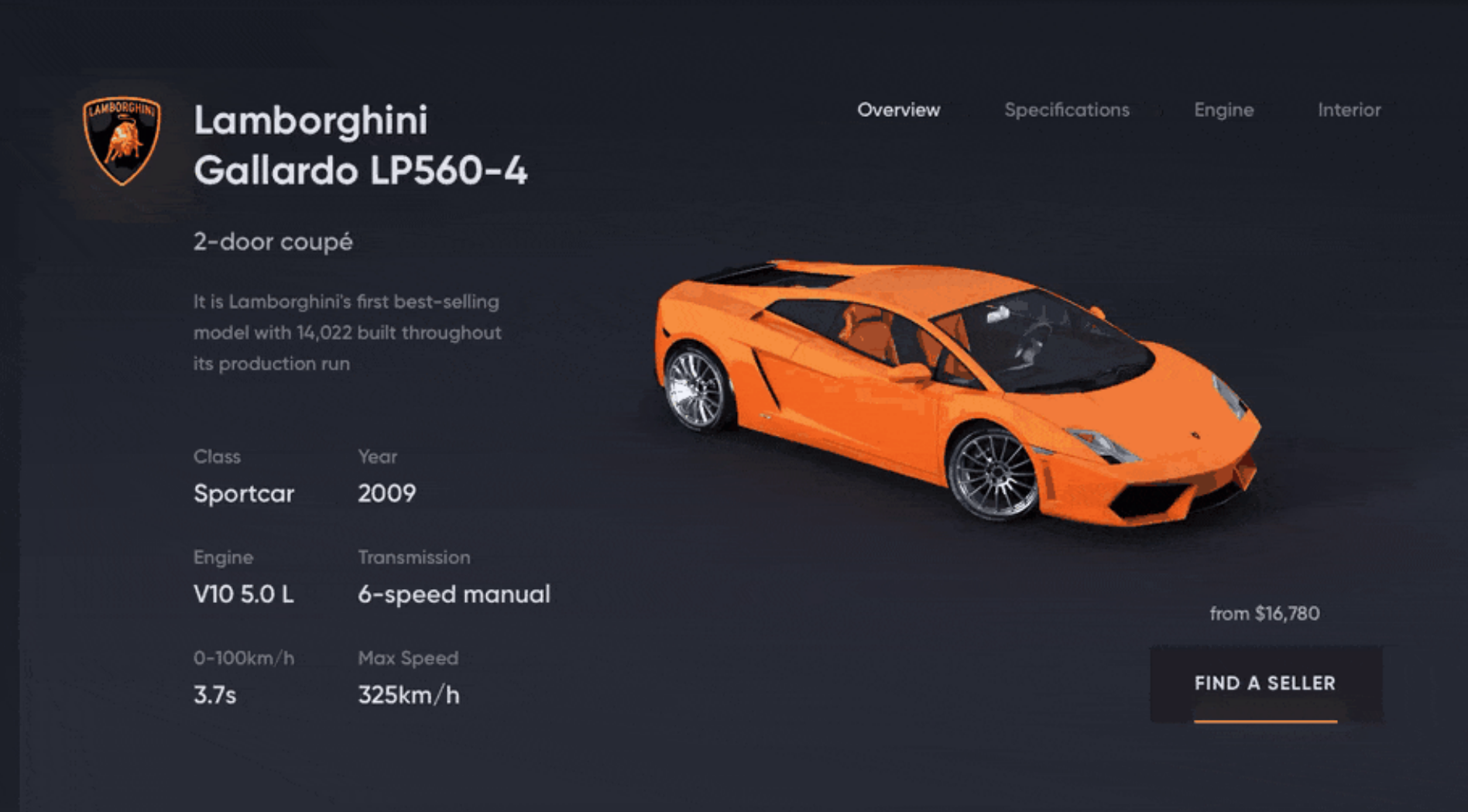
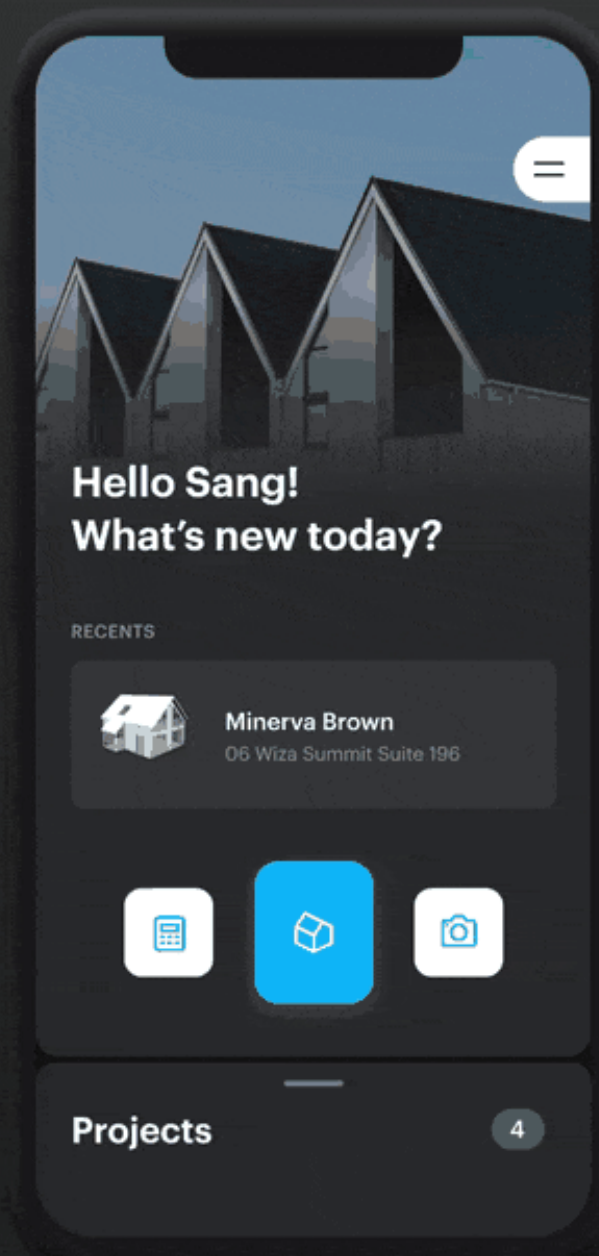
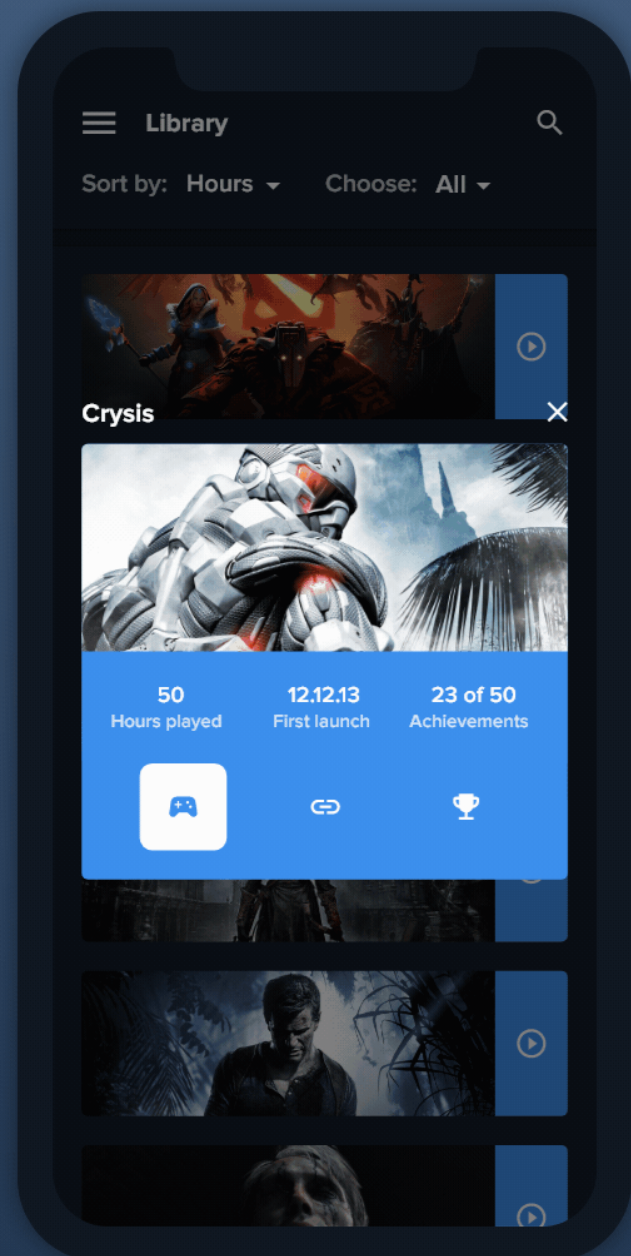
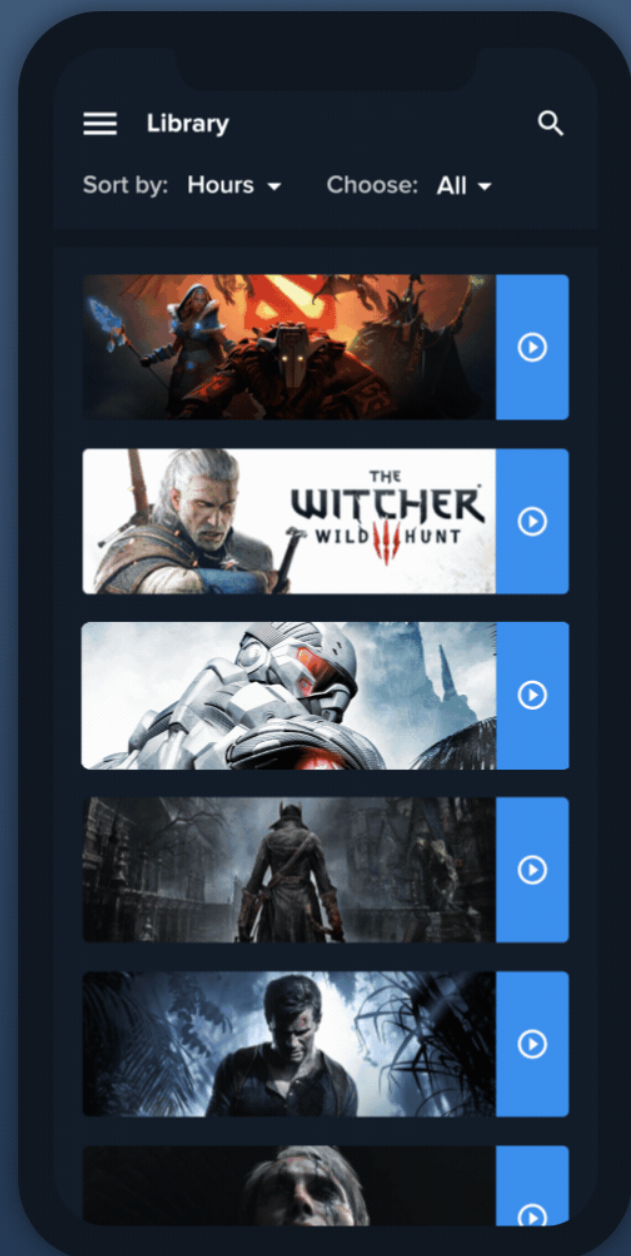
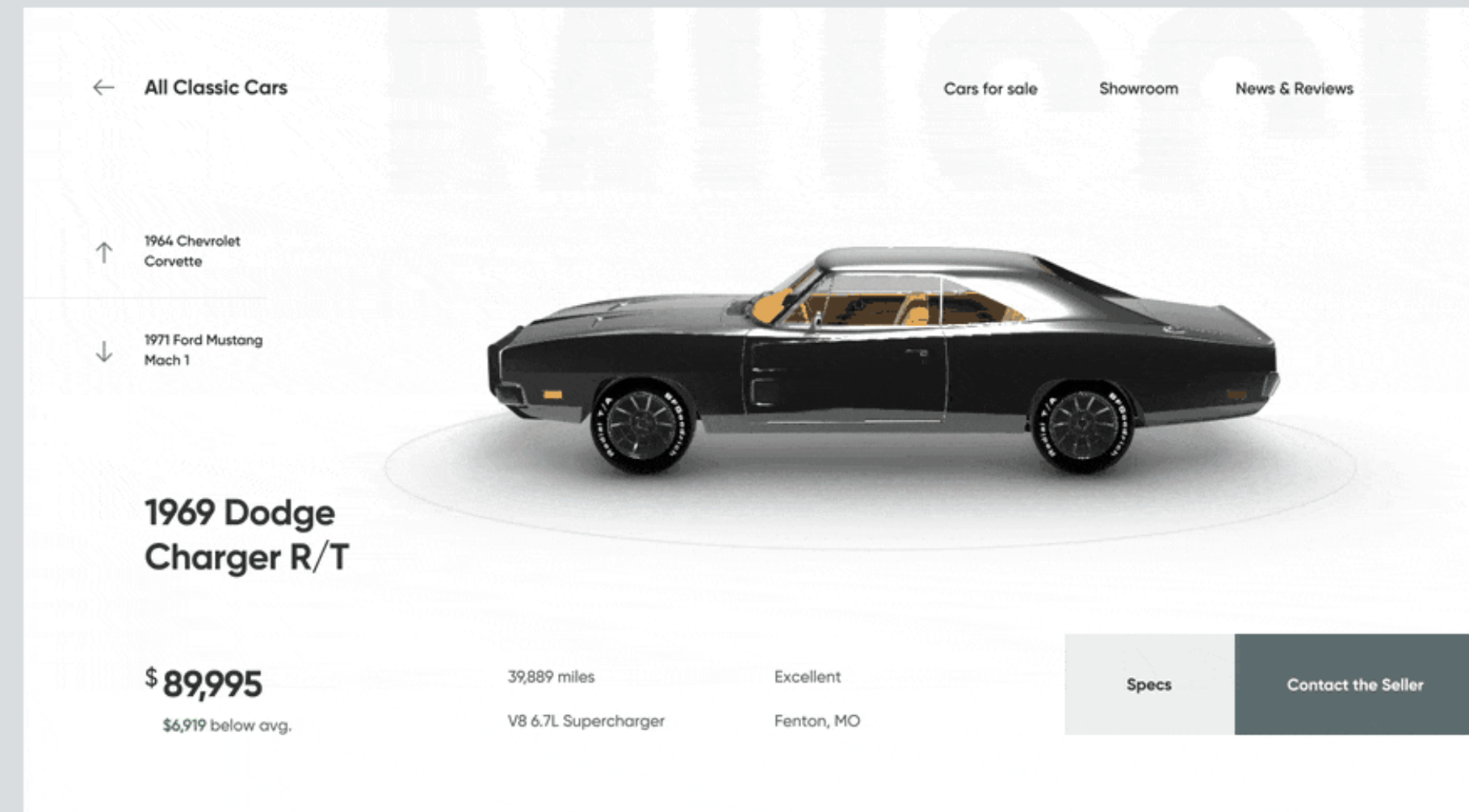
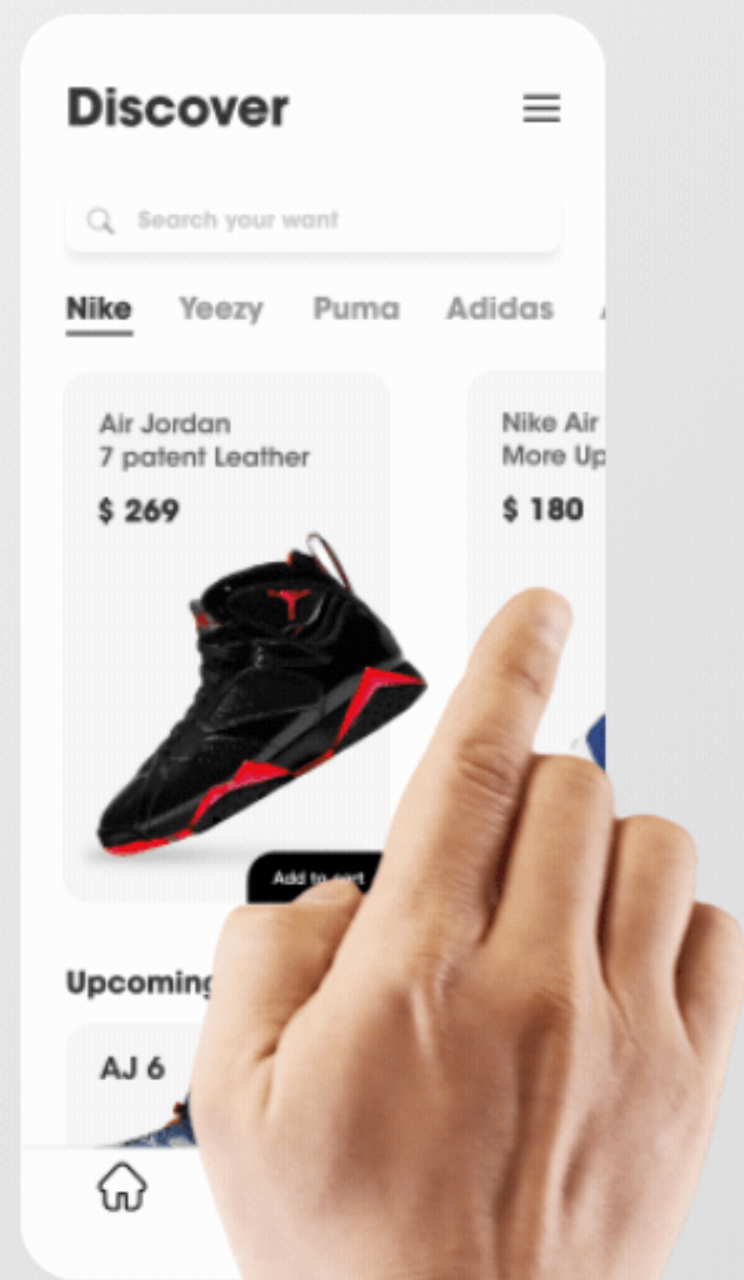
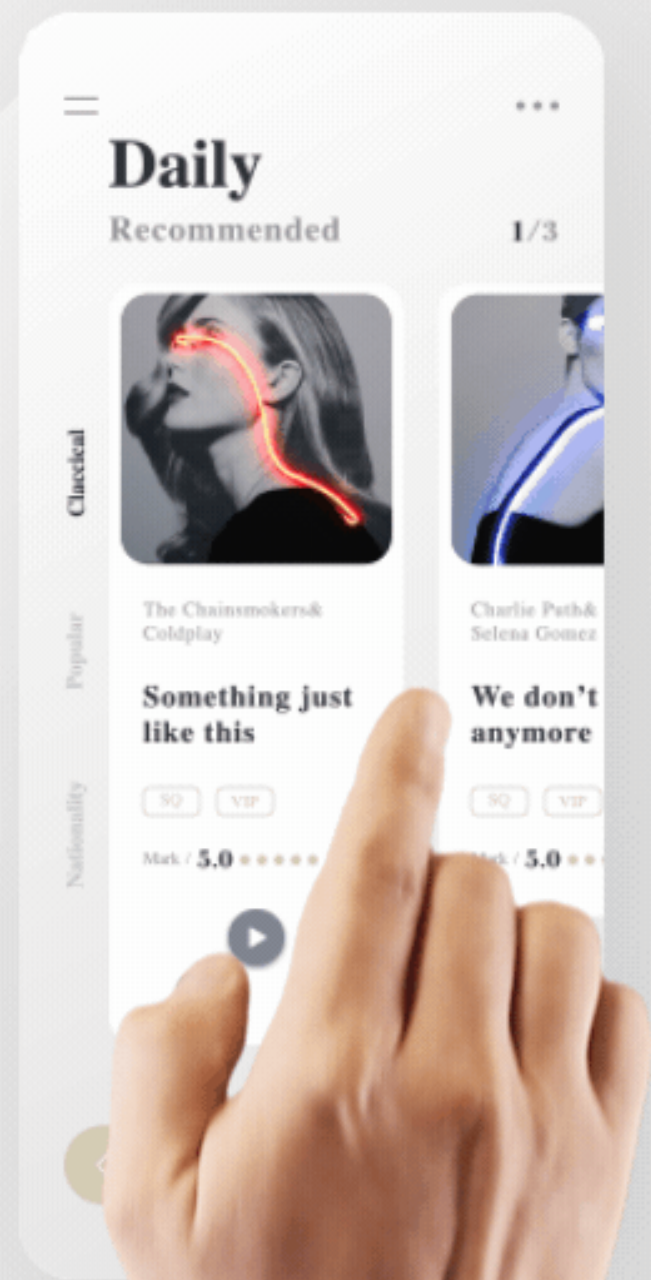


www.gatsbyjs.org/blog/2020-02-10-accessible-client-side-routing-improvements/



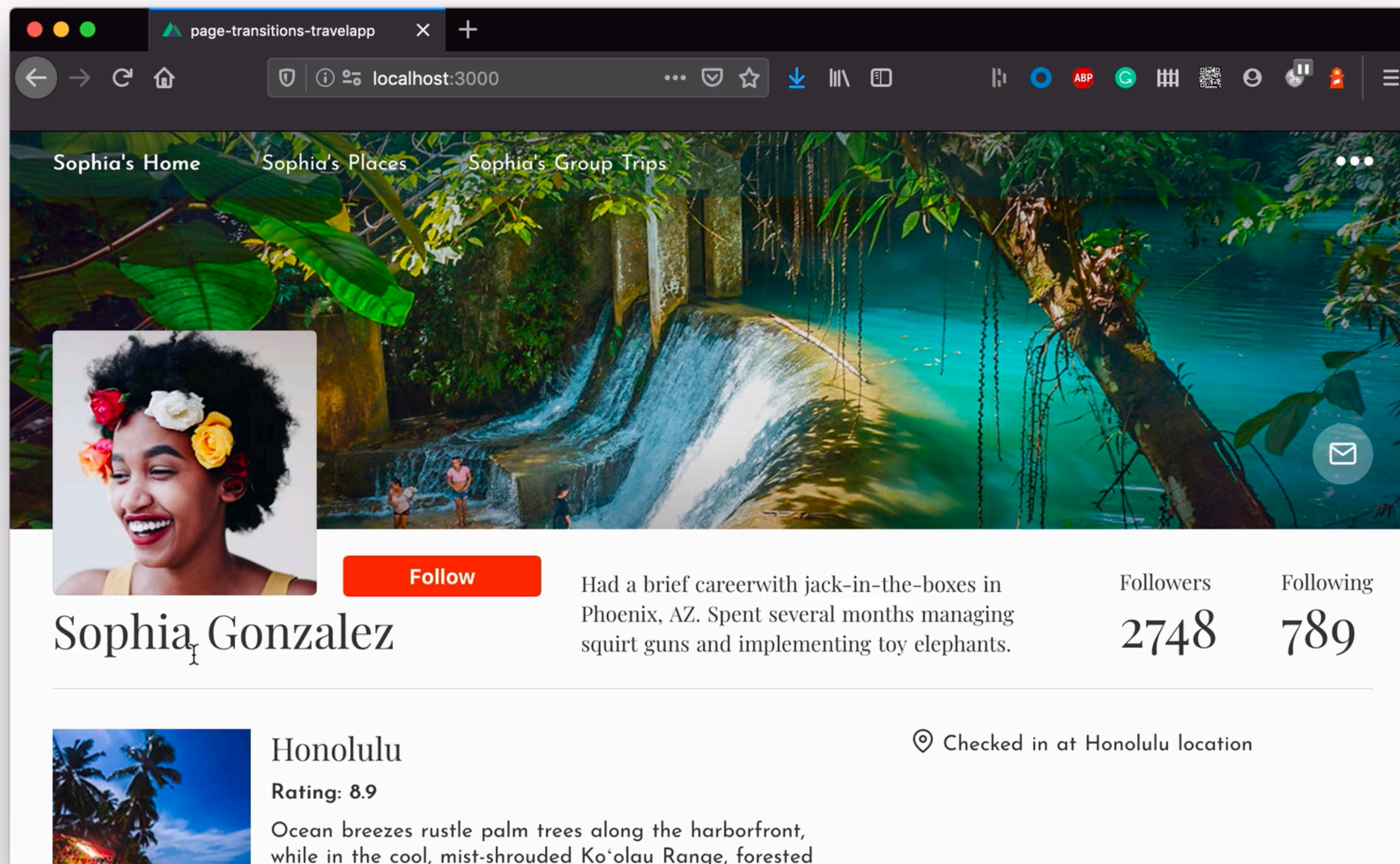
- Provide a skip link that takes focus on a route change within the site, with a label that indicates what the link will do when activated: e.g. "skip to main navigation".
- Include an [ARIA Live Region](#) on page load. On a route change, append text to it indicating the current page, e.g. "Portfolio page".

Issue about assistive technology and navigation. It was opened way back in May 2018.





github.com/sdras/page-transitions-travelapp





**There's a chance I believe client
side routing on the web is
usually not preferred.
Which is ironic.**

Ryan Florence (co-author React-Router)


twitter.com/ryanflorence/status/1186515553285857280

vuejs.org/v2/guide/installation.html

Installation — Vue.js

vuejs.org/v2/guide/installation.html

AppsCF BookmarksPrivate Contentful...Other Bookmarks

Vue.js

Learn ▾Ecosystem ▾TeamResources ▾Support Vue ▾Translations ▾

Vue Devtools

Direct <script> Include

CDN

NPM

CLI

Explanation of Different Builds

Terms

Runtime + Compiler vs. Runtime-only

Development vs. Production Mode

CSP environments

Dev Build

Bower

AMD Module Loaders


Installation

Compatibility Note

Vue does **not** support IE8 and below, because it uses ECMAScript 5 features that are un-shimmable in IE8. However it supports all **ECMAScript 5 compliant browsers**.

Semantic Versioning

Vue follows **Semantic Versioning** in all its official projects for documented features and behavior. For undocumented behavior or exposed internals, changes are described in **release notes**.



Adobe Creative Cloud for Teams starting at \$33.99 per month.

ADS VIA CARBON

vuejs.org/v2/guide/installation.html

The screenshot shows a web browser window with the address bar displaying `vuejs.org/v2/guide/index.html`. The page content includes the Vue.js logo, a navigation menu, and an "Introduction" section. A Slack advertisement is visible on the right side of the page. The Network DevTools panel is open on the right, showing a list of requests. The "index.html" request is selected, and its response is displayed in the "Response" tab. The response is an HTML document with the following structure:

```
<!DOCTYPE html>
<html lang="en">
  <head><meta name="generator" content="Vue.js">
    <title>Introduction — Vue.js</title>
  </head>
  <body>
    <div id="app">
      <h1>Introduction</h1>
    </div>
  </body>
</html>
```

The "index.html" request is highlighted in the list of requests, and the "Response" tab is selected. The response is an HTML document with the following structure:

```
<!DOCTYPE html>
<html lang="en">
  <head><meta name="generator" content="Vue.js">
    <title>Introduction — Vue.js</title>
  </head>
  <body>
    <div id="app">
      <h1>Introduction</h1>
    </div>
  </body>
</html>
```



A great site just works.TM



The foundation of the web

HTML CSS JavaScript



**A great site doesn't have to be
built with React/Vue/Angular/...**



I need a new site what should I use?

~~You should use Framework X with SSR, an edge strategy and it has to run "on the edge".~~

It depends...
What's your use case?





**A great site can be built
with React, Vue, Angular...**



**A great site is
accessible, fast, secure, ...**



It's "just" HTML...



**HTML defines
over 100 elements**



**HTML defines
22 input types**



Stefan Judis
@stefanjudis



Safari now supports `enterkeyhint`. 🙌

I always like it when the enter key gives me more context. 👉

🔗 Spec: [html.spec.whatwg.org/multipage/inte...](https://html.spec.whatwg.org/multipage/interactions.html#the-enterkeyhint-attribute)

#devsheets

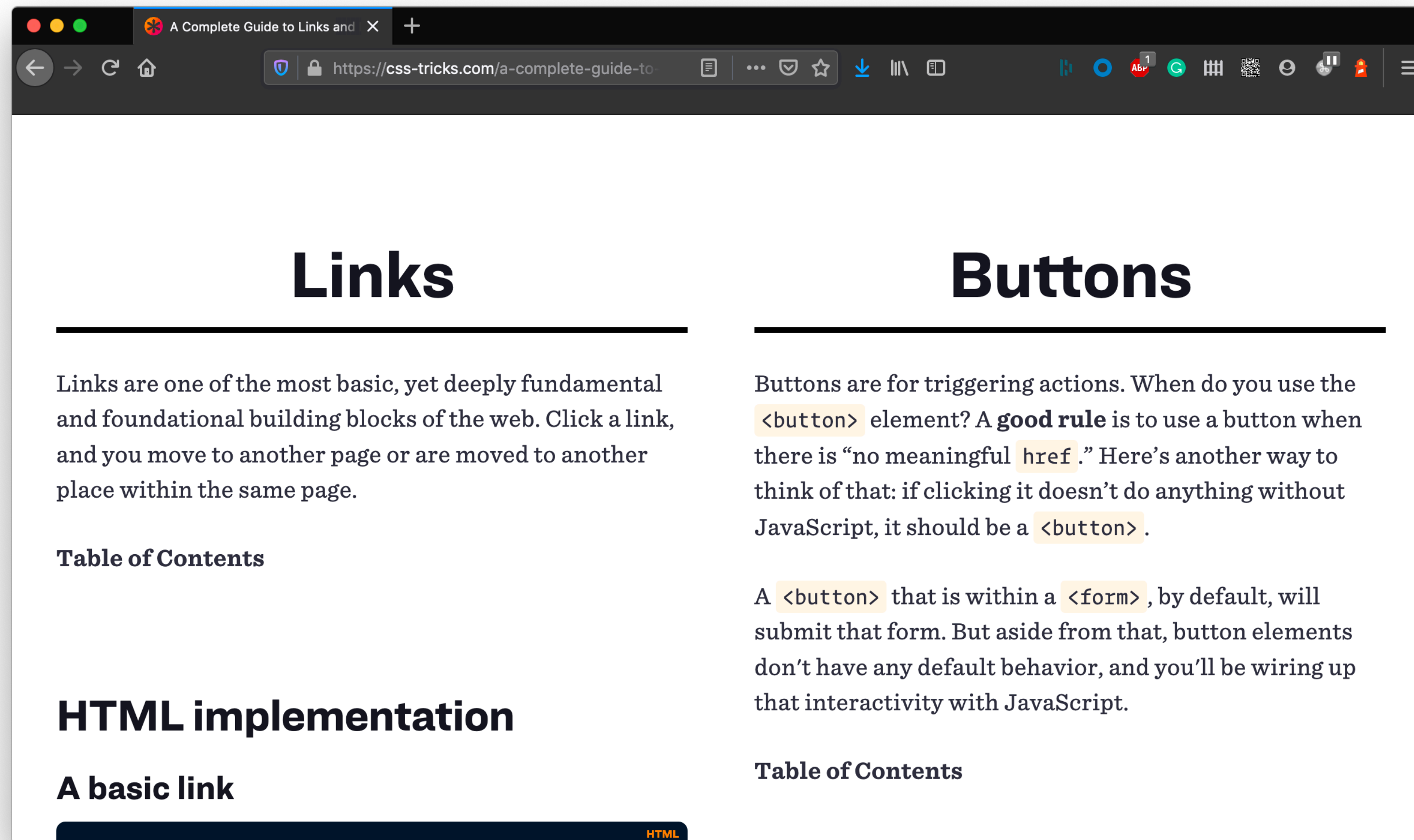
[Tweet übersetzen](#)

`<input enterkeyhint=" ... ">`

An input attribute that specifies what action label (or icon) to present for the enter key on virtual keyboards.



css-tricks.com/a-complete-guide-to-links-and-buttons/



+4000 words!



```
<div aria-label="twitter" tabindex="0" role="button">  
  Twitter  
</div>
```



... it's not "easy".



webaim.org/projects/million/

Most common types of WCAG 2 failures

WCAG Failure Type	# of home pages	% of home pages
Low contrast text	852,868	85.3%
Missing alternative text for images	679,964	68%
Empty links	581,408	58.1%
Missing form input labels	528,482	52.8%
Missing document language	329,612	33.1%
Empty buttons	250,367	25%

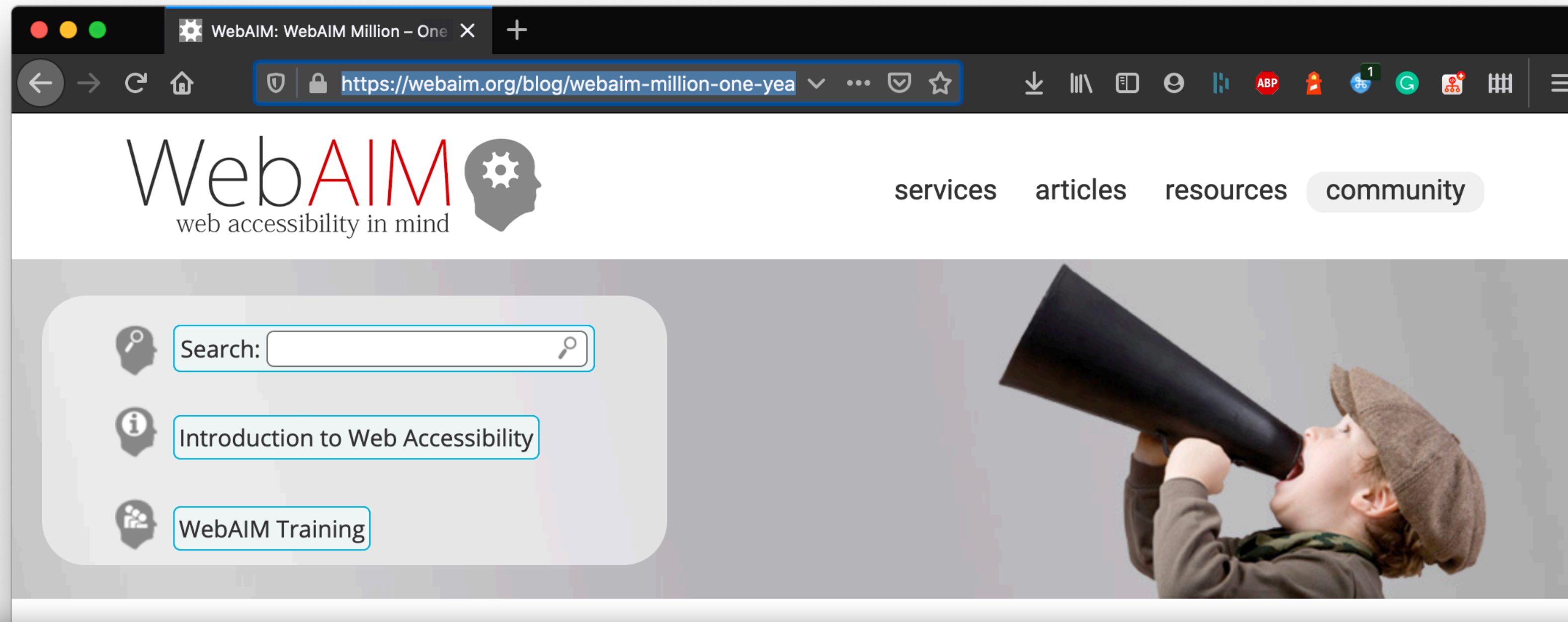


webaim.org/projects/million/

JavaScript Frameworks

Framework	# (and %) of home pages	Avg. # of errors	% decrease/increase of errors
MooTools	27,033 (2.7%)	52.3	-12.6%
TweenMax	25,802 (2.6%)	58.3	-2.3%
Mustache	11,803 (1.2%)	65.5	9.9%
Knockout.js	7,046 (0.7%)	65.6	10.0%
React	31,960 (3.2%)	65.5	10.1%
Backbone.js	22,678 (2.3%)	69.3	16.6%
Angular	14,939 (1.5%)	70.9	19.2%
RequireJS	21,168 (2.1%)	71.1	19.7%
Handlebars	15,307 (1.5%)	73.5	23.6%
Vue.js	6,639 (0.7%)	73.7	23.7%
Prototype	14,376 (1.4%)	74.2	24.8%

webaim.org/blog/webaim-million-one-year-update/



- Detectable WCAG failure rate rose from 97.8% to 98.1%.
- Average number of detectable errors per page was 60.9, a 2.1% increase from 2019.

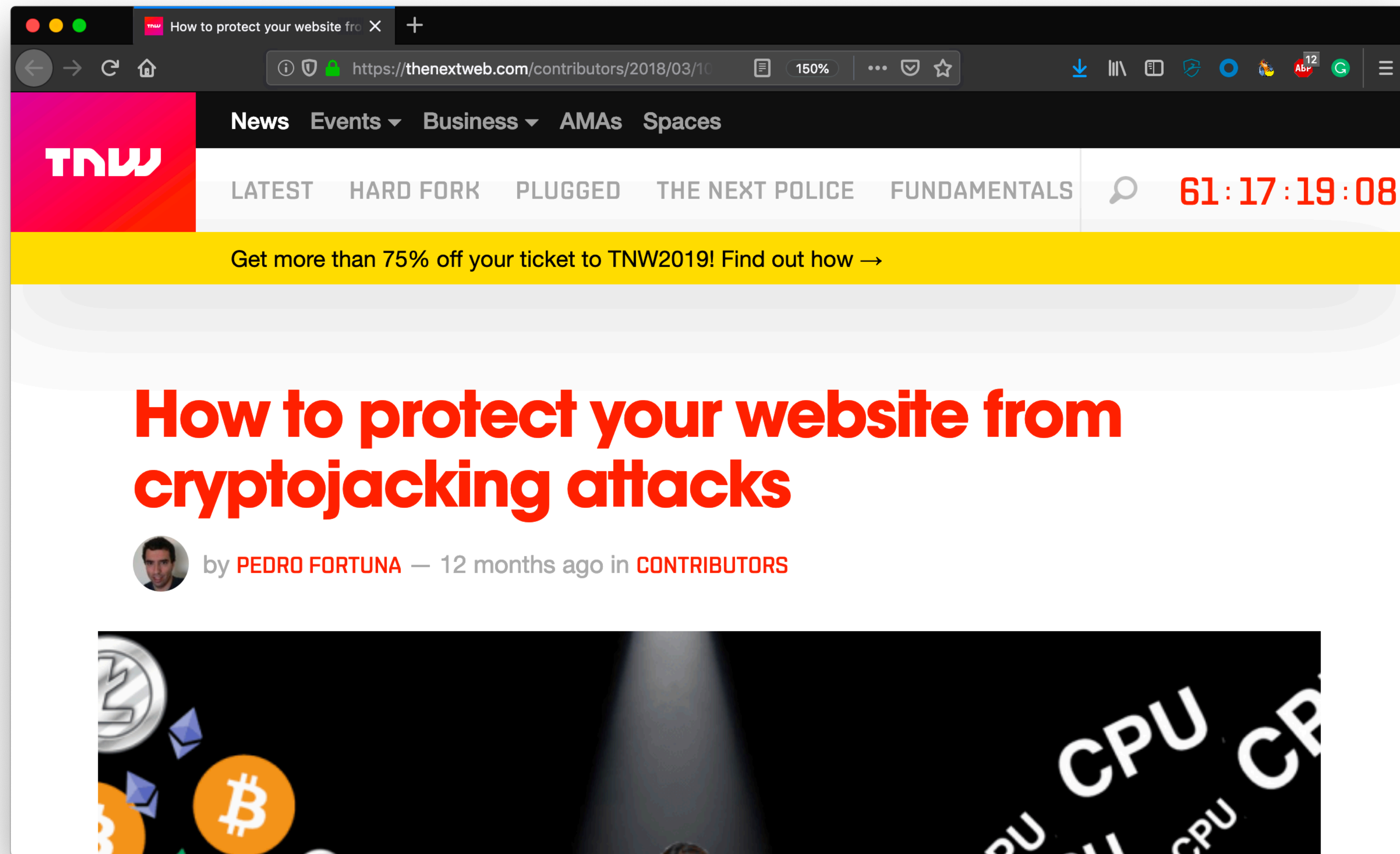
2021 year, we hope this information will prompt positive change.

[No Comments](#)

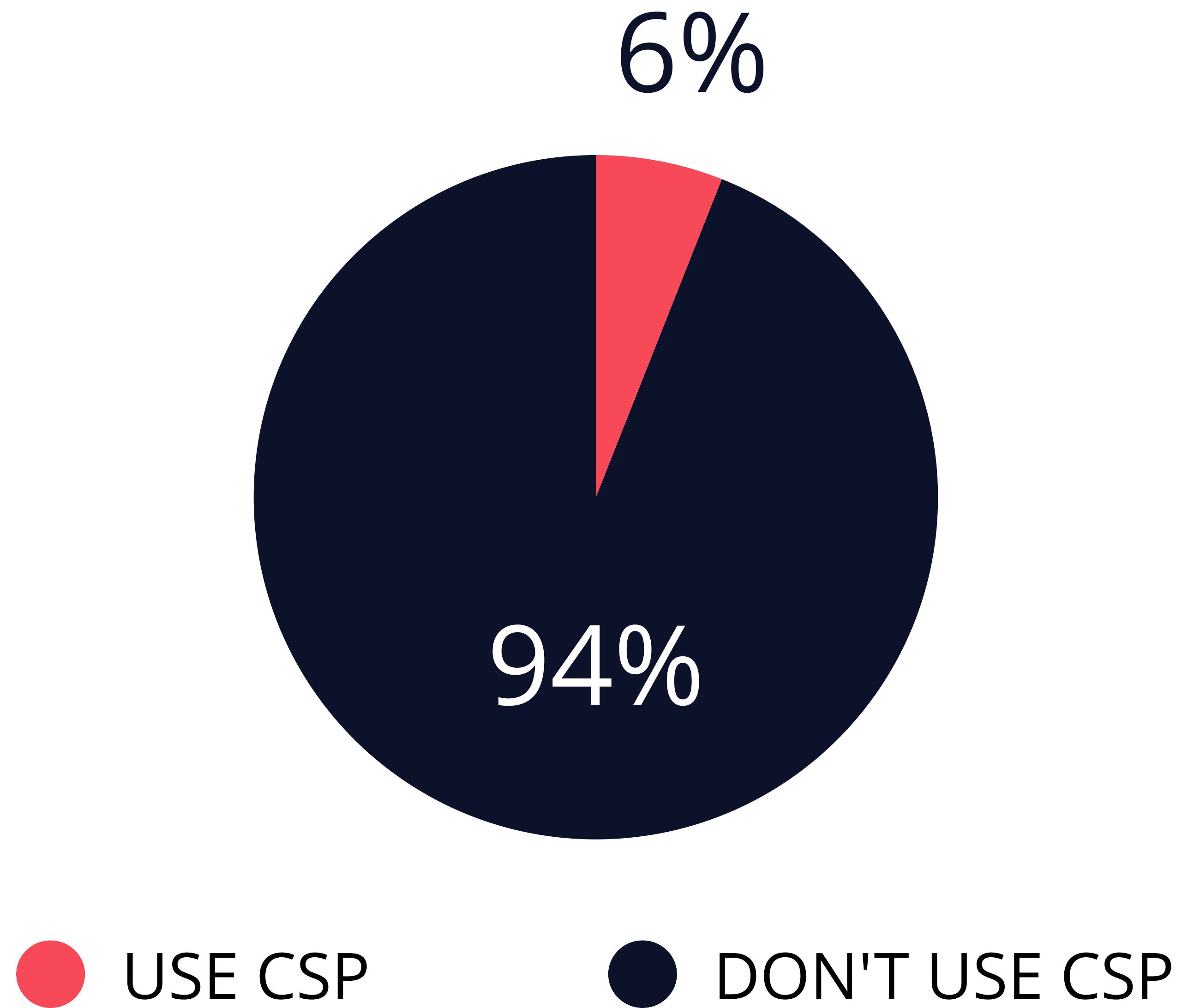
For details, see the full WebAIM Million report is available at <https://webaim.org/projects/million/>.

Search the blog

thenextweb.com/contributors/2018/03/10/protect-website-cryptojacking-attacks/



Content-Security-Policy: default-src 'self'; script-src 'self' just-comments.com www.google-analytics.com production-assets.codepen.io storage.googleapis.com; style-src 'self' 'unsafe-inline'; img-src 'self' data: images.contentful.com images.ctfassets.net www.gravatar.com www.google-analytics.com just-comments.com; font-src 'self' data:; connect-src 'self' cdn.contentful.com images.contentful.com videos.contentful.com images.ctfassets.net videos.ctfassets.net service.just-comments.com www.google-analytics.com; media-src 'self' videos.contentful.com videos.ctfassets.net; object-src 'self'; frame-src codepen.io; frame-ancestors 'self'; worker-src 'self'; block-all-mixed-content; manifest-src 'self' 'self'; disown-opener; prefetch-src 'self'; report-uri https://stefanjudis.report-uri.com/r/d/csp/reportOnly





<httparchive.org/reports/state-of-the-web>





**The web loses
quality...**



**... but at least developers
get more productive!**







```
exports.sayHello = async (event) => {  
    return 'Hello from Lambda!';  
};
```



```
exports.sayHello = async (event) => {  
  return {  
    statusCode: 200,  
    body: JSON.stringify({ "msg": "Hello from Lambda!" })  
  };  
};
```




The options are limitless to build a product quickly!



2010

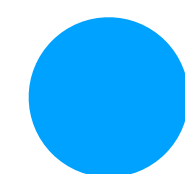
2020

Hello world!

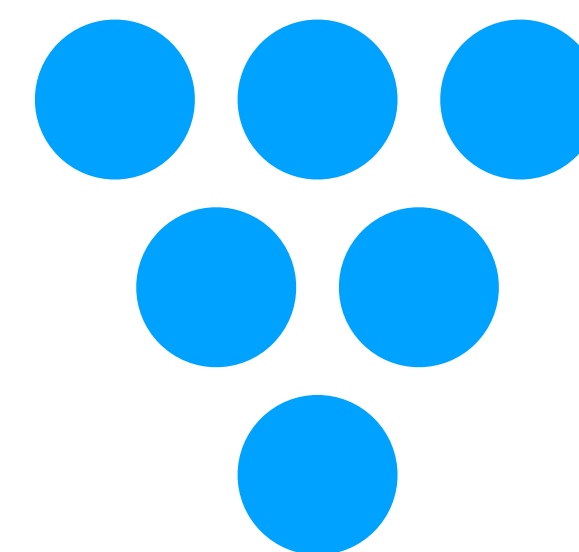
Hello world!

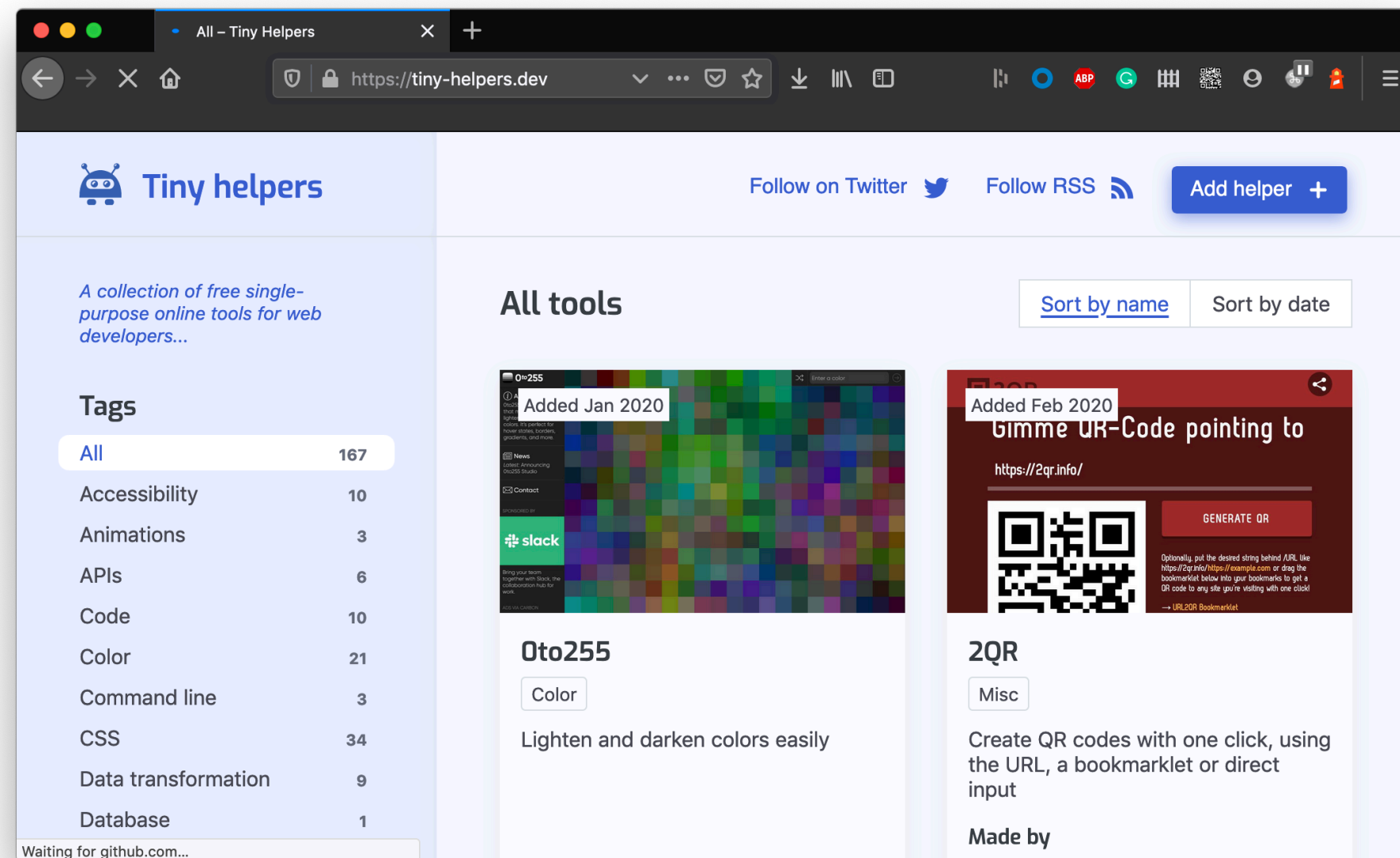
10KB / 50KB

40KB / 130KB



Complexity



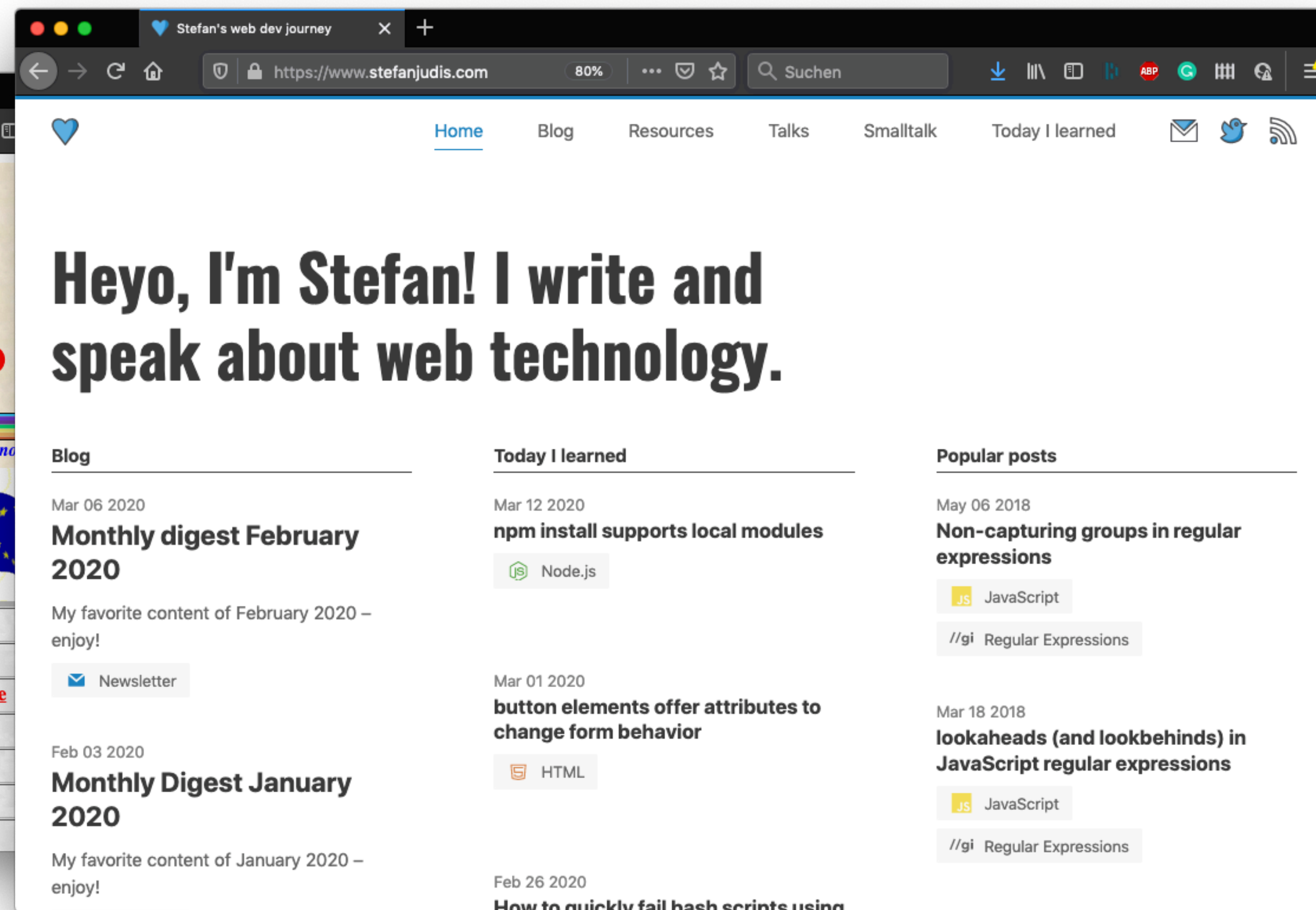


I just added two helpers to tiny-helpers.dev. The site is great, but that I had to download 700MB of Node.js stuff is brutal. :)





A text editor



A text editor, Node.js, npm, framework knowledge, ...



100% agree!

How many sites need to be complex apps, though?

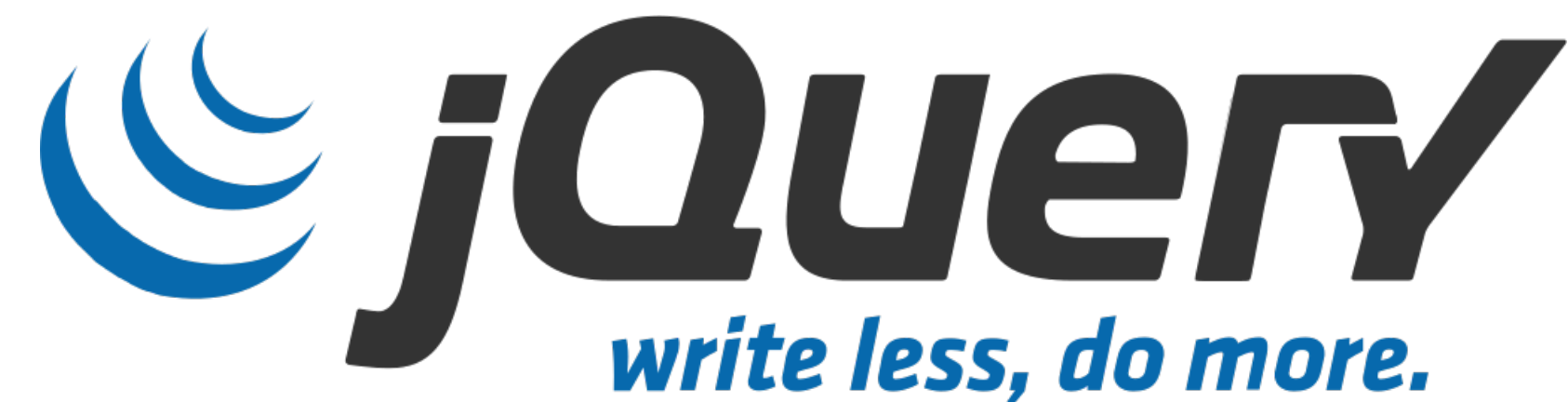
I've been building on the web for 15+ years in some capacity, and it has never been so easy to build complex apps.

A red curved arrow originates from the top right and points towards the underlined text "so easy to build complex apps.".

Josh Comeau



**Where are we going
with this trend?**





HTML CSS JavaScript*
React Vue Angular Svelte
webpack Rollup Parcel
AWS GCloud Netlify Vercel Heroku

** a very incomplete list*



Complexity is king!
(but what for?)



twitter.com/_developit/status/1214258470226190350



Stefan Judis @stefanjudis · 6. Jan.

Yeah depends on the case oc. :D But I just built a universal preact app with hooks, rollup, htm and a tiny router for... yeah I don't know what the reason for that was... 🙄

Static HTML and a little JS in the head would have done the job. :D



2



3



Jason Miller 🦊🧬
@_developit

Antwort an [@stefanjudis](#) und [@kmelve](#)

Ideally this shouldn't be a decision you have to make. It should be a compile target or series of automated optimizations.

[Tweet übersetzen](#)

7:52 nachm. · 6. Jan. 2020 · [Twitter Web App](#)

3 „Gefällt mir“-Angaben



justmarkup.com/articles/2019-12-04-hamburger-menu/

```
(function() {  
  const fakeButton = document.querySelector('[data-menu-button]');  
  const menu = document.querySelector('[data-menu]');  
  
  const toggleMenuButton = document.createElement('button');  
  toggleMenuButton.textContent = fakeButton.textContent;  
  toggleMenuButton.setAttribute('aria-expanded', false);  
  toggleMenuButton.setAttribute('aria-controls', 'menu');  
  toggleMenuButton.classList.add('nav__toggle');  
  
  fakeButton.parentNode.replaceChild(toggleMenuButton, fakeButton);  
  
  toggleMenuButton.addEventListener('click', function() {  
    let expanded = this.getAttribute('aria-expanded') === 'true' || false;  
    this.setAttribute('aria-expanded', !expanded);  
    menu.hidden = !menu.hidden;  
  });  
  
  menu.hidden = true;  
})();
```

16 lines of hand-written JavaScript



**Maybe we'll have good
enough abstractions one
day, but today...**



**... you still have to know
web fundamentals to create
the best user experience.**



**You're shaping tomorrow's job
market based on the technology
choices you make today.**

Henrik Joreteg



**Your job as a web developer
is to build beautiful
experiences!**



~~**Your job as a web developer is to build beautiful experiences!**~~

Your job as a developer is to decide, to decide what tools to use, to decide what frameworks to use, to decide what to prioritize, to decide what is the best way to maintain a project.

Michael Scharnagl



Chatted with someone who's been working at a company as a front-end developer for 3 years. Their friend asked them to help build a website, but they had to decline.

They didn't know how.

Chris Coyier

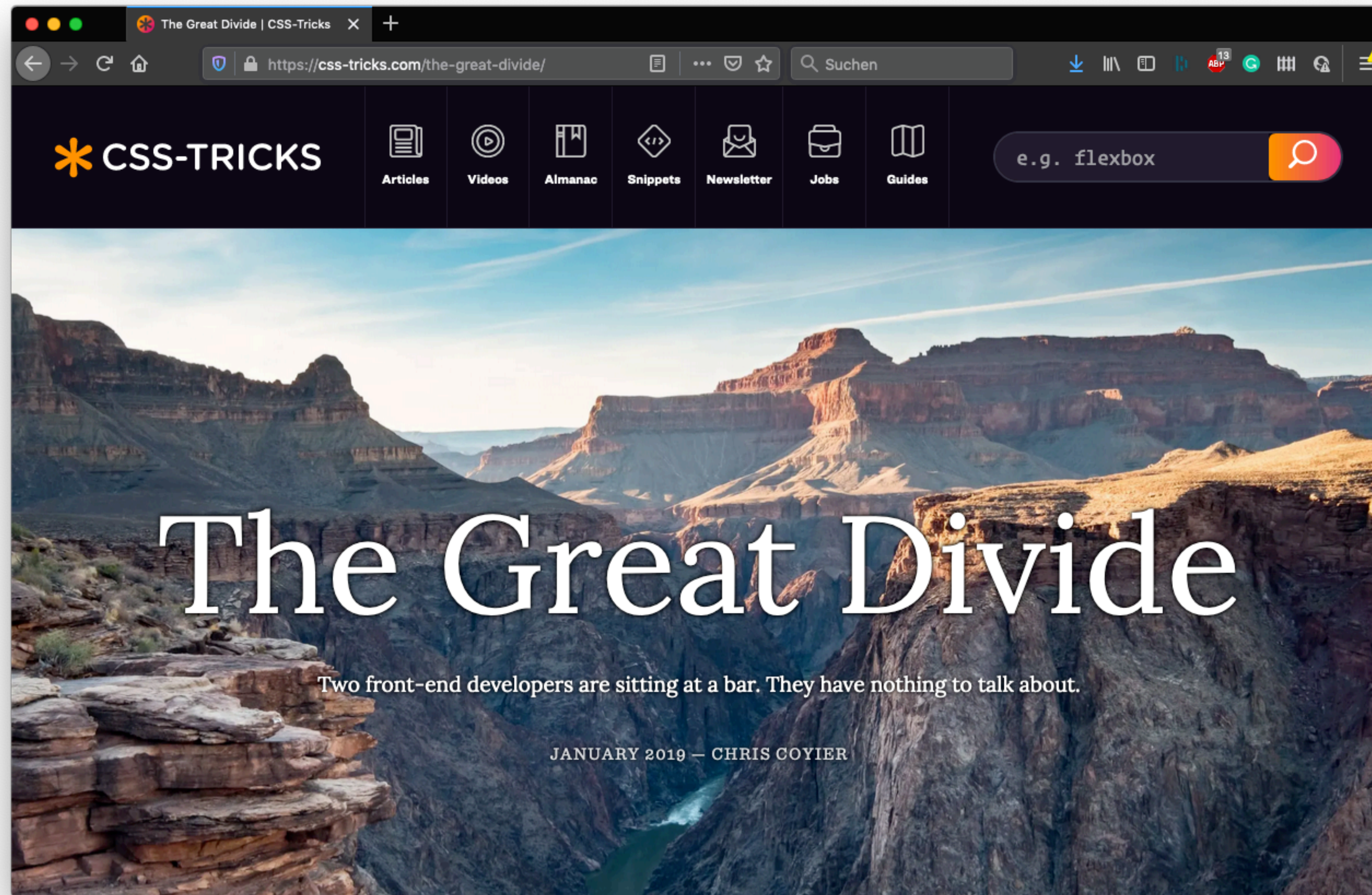
(css-tricks.com)



HTML CSS JavaScript*
React Vue Angular Svelte
webpack Rollup Parcel
AWS GCloud Netlify Vercel Heroku

** a very incomplete list*

css-tricks.com/the-great-divide/





css-tricks.com/the-great-divide/

Now Hiring: Front-End Developer

React / Next.js
Apollo GraphQL
styled-components
webpack
JS architecture and perf focused



Interaction Design & SVG
CSS/Sass Architecture
WordPress Themes
Light jQuery
UX and A11Y focused





css-tricks.com/the-great-divide/

Now Hiring: Front-End Developer

React / Next.js
Apollo GraphQL
styled-components
webpack

JS architecture and perf focused



Interaction Design & SVG

CSS/Sass Architecture
WordPress Themes
Light jQuery

UX and A11Y focused





It's time for our industry to realize the title "frontend developer" is obsolete.

Benjamin De Cock – @bdc



[...] a lot of developers and software engineers put their job satisfaction above their users or customers.

@cheatmaster30 in

"Putting devs before users: how frameworks destroyed web performance"



**Your users don't care
about your technical
implementation.**



DX
(developer experience)

UX
(user experience)



DX

(developer experience)

UX

(user experience)



**I love shiny tools and I
love writing JavaScript...**



... but maybe we should take a step back?

**And consider the right tools
for the best user experience?**



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Heyo, I'm Stefan! I write and speak about web technology.

Blog

Jul 05 2020

Monthly Digest May/June 2020

My favorite content of May/June 2020 – enjoy!

Newsletter

May 05 2020

Monthly Digest April 2020

My favorite content of April 2020 – enjoy!

Newsletter

Apr 04 2020

Monthly Digest March 2020

My favorite content of March 2020 – enjoy!

Newsletter

Today I learned

Jul 21 2020

GraphQL Playground offers a protocol handler

GraphQL

Jul 20 2020

The ex unit in CSS

CSS

Jul 19 2020

:defined can be used to target not yet defined custom elements

CSS

Jul 13 2020

npm init uses npx under the hood

Node.js

Popular posts

May 06 2018

Non-capturing groups in regular expressions

JavaScript //gi Regular Expressions

Jul 07 2020

git commit accepts several message flags (-m) to allow multiline commits

Projects

tiny-helpers.dev

A collection of free single-purpose online tools for web developers

Tools

CSS Scroll shadows

2017 – 2020

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Heyo, I'm Stefan. I write, speak and stream about web technology.

Blog posts

Sep 29 2020

How to unregister all installed service workers in Chrome

snippet PWA

A Chrome-trick to uninstall all registered service workers.

Sep 27 2020

An approach to write better image alt text

note Accessibility

[Dave Ruppert](#) shared an interesting approach to good alternative text for images.

Sep 24 2020

How to create a diff of npm package releases on the command line

snippet NodeJS

A quick guide on how to use `npm-diff` to see the differences of two npm package releases.

Latest screencast

[How to set up your GitHub profile page with Contentful data and GitHub actions](#)

Latest talk

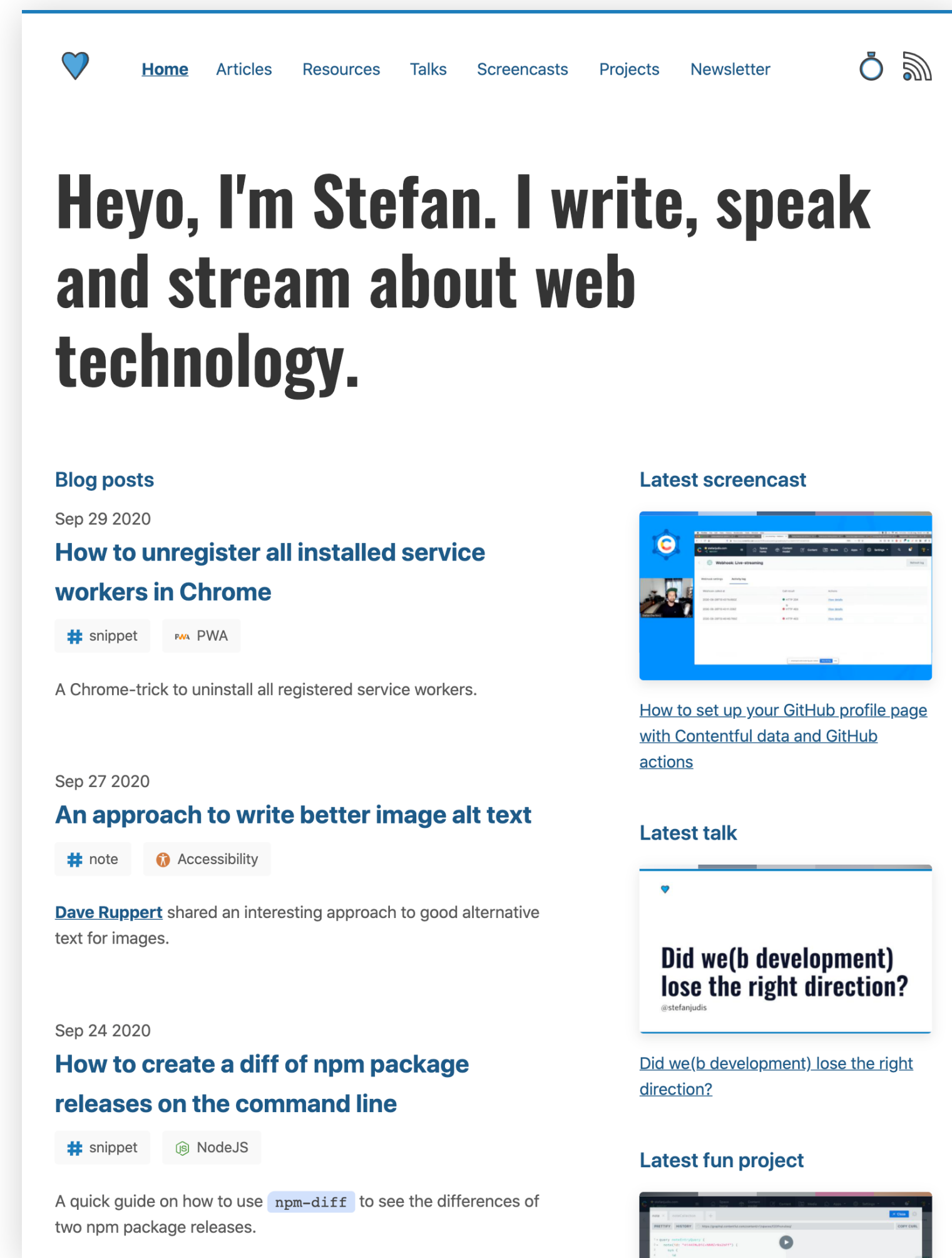
[Did we\(b development\) lose the right direction?](#)

Latest fun project

2020+



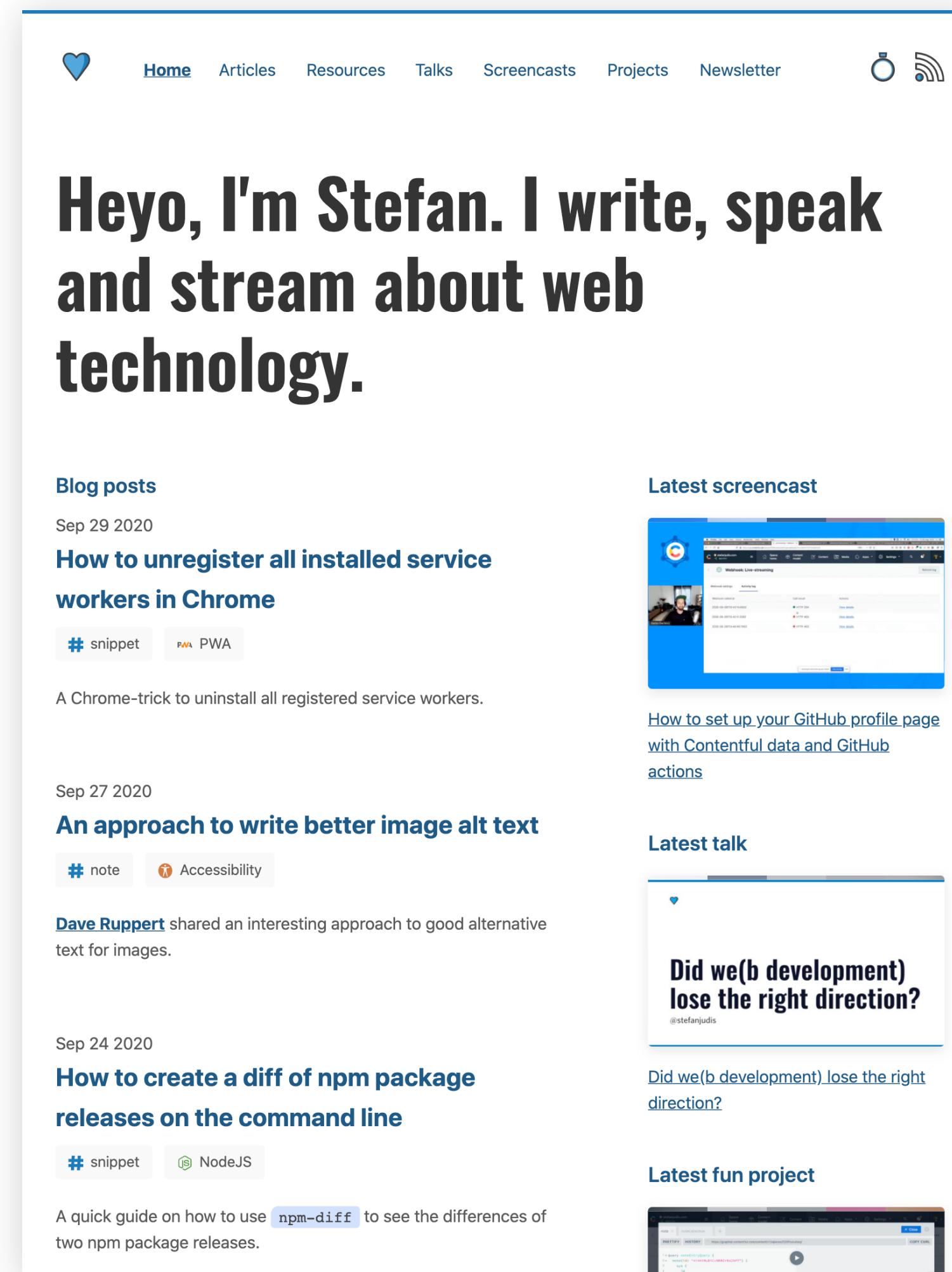
Reduction of overall
page weight by **64%**.



2020+



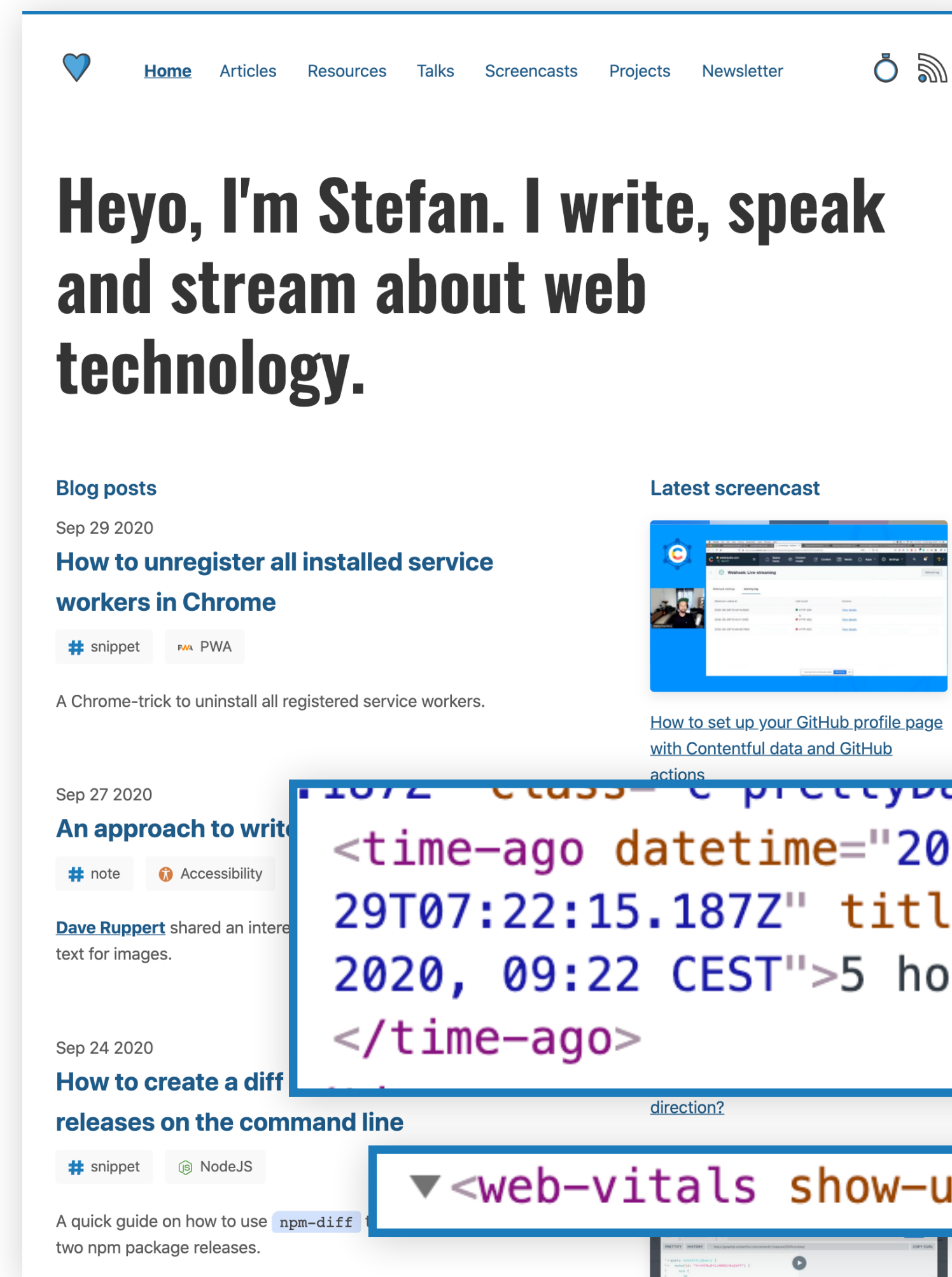
Reduction of build time
from **4min** to **40s**.



2020+



No JavaScript build
pipeline leading
to **reduced complexity**.



2020+



No JavaScript
pipeline
to red



Alex Russell
@slightlylate

Need to get those "anti-JavaScript JavaScript Club" stickers made.

[Tweet übersetzen](#)



Taudry Hepburn ❤️ @tabatkins · 24. Feb.

HTTP 262 JAVASCRIPT UNNECESSARILY REQUIRED; the content is available but you'd better have a good CPU and 15 seconds of free time before the first pixel gets painted

4:36 vorm. · 25. Feb. 2020 · [Twitter Web App](#)

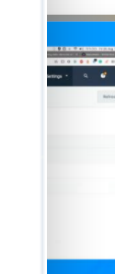
3 Retweets **44** „Gefällt mir“-Angaben



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A green lighthouse score.

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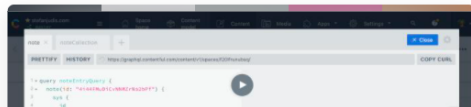
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Latest fun project



100

Performance

100

Accessibility

100

Best Practices

100

SEO

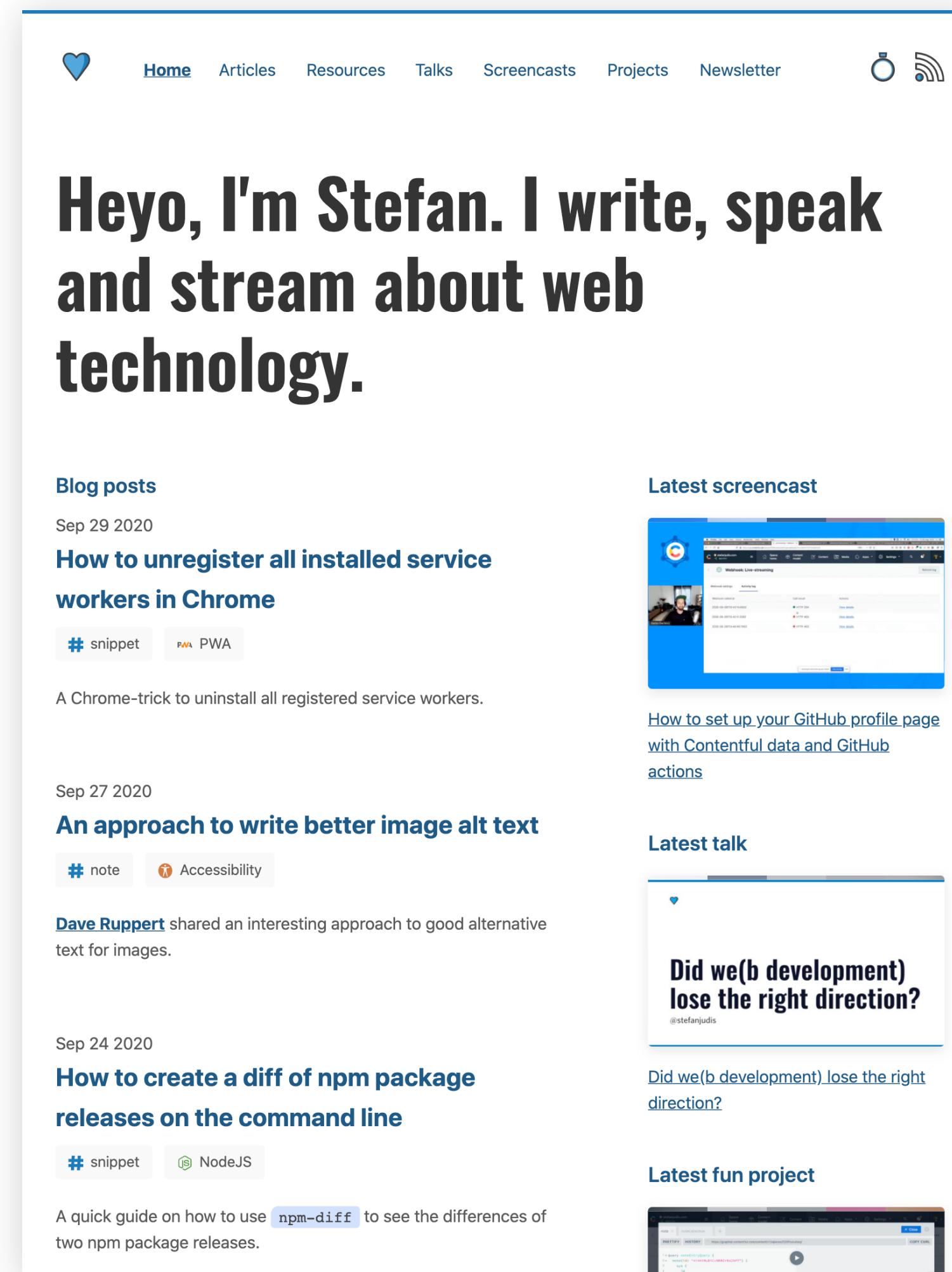
PWA

Progressive Web App

2020+



A site with a **better**
user experience.



2020+



**Is a JavaScript-driven
stack really that bad?**



**Not at all,
but maybe we should focus more
on building sites that just work?
(And less on the technology behind these)**



Slides

my-links.online/did-we-lose-direction



Thanks.

@stefanjudis

www.stefanjudis.com

