

Reducing Layout Shift With

CUSTOM FALLBACK FONTS

Custom Fallback Fonts

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Edited By:
Kimer Lorens





FOUT

Flash of Unstyled Text

FFOUTT

The diagram illustrates font fallback for the word "FOUT". It features two lines of text. The top line shows the word "FOUT" in a stylized, orange, outlined font, with a dotted line pointing to the label "Brand Font". The bottom line shows the word "FOUT" in a bold, black, sans-serif font, with a dotted line pointing to the label "Fallback".

FOUT Brand Font

FOUT Fallback

Top Websites Ranking

Most Visited Websites in Germany

Last updated : March 1, 2023

All Categories Germany Go

Rank	Website	Rank Change	Avg. Visit Duration	Pages / Visit	Bounce Rate
1	google.com	=	🔒	🔒	🔒
2	youtube.com	=	🔒	🔒	🔒
3	google.de	=	🔒	🔒	🔒
4	facebook.com	=	🔒	🔒	🔒
5	amazon.de	=	🔒	🔒	🔒
6	wikipedia.org	=	🔒	🔒	🔒
7	bild.de	=	🔒	🔒	🔒
8	ebay.de	=	🔒	🔒	🔒
9	t-online.de	↑ 1	🔒	🔒	🔒
10	ebay-kleinanzeigen.de	↓ 1	🔒	🔒	🔒
11	instagram.com	=	🔒	🔒	🔒
12	web.de	=	🔒	🔒	🔒
13	twitter.com	=	🔒	🔒	🔒
14	pornhub.com	=	🔒	🔒	🔒
15	n-tv.de	↑ 1	🔒	🔒	🔒
16	tagesschau.de	↓ 1	🔒	🔒	🔒
17	gmx.net	=	🔒	🔒	🔒
18	paypal.com	=	🔒	🔒	🔒

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Dimensions: Samsung... 360 x 740 100%

Network

Filter

Blocked Requests 3rd-party requests

Name	Status	Protocol	Type	Initiator	Size
------	--------	----------	------	-----------	------

0 / 355 requests | 0 B / 8.5 MB transferred | 0 B / 11.1 MB resources | Finish: 7.68 s | DOMContentLoaded: 3.41 s

The image shows a mobile browser view of the Twitch website. A font inspection tool is overlaid on the 'Welcome to Twitch!' text, showing its color as #EFFFF1, font as 36px Roobert, Inter, 'Helvetica Neue', and its role as a paragraph. A network monitor overlay is also present, showing a timeline of requests. The bottom status bar indicates 0 / 355 requests, 0 B / 8.5 MB transferred, 0 B / 11.1 MB resources, a finish time of 7.68 s, and a DOMContentLoaded time of 3.41 s.

Mobile Desktop

Discover what your real users are experiencing

This URL Origin



Core Web Vitals Assessment: Failed

Expand view

Largest Contentful Paint (LCP)

4 s



First Input Delay (FID)

1,334 ms



Cumulative Layout Shift (CLS)

0.07



OTHER NOTABLE METRICS

First Contentful Paint (FCP)

3 s



Interaction to Next Paint (INP)

2,897 ms



Time to First Byte (TTFB)

2.5 s



Latest 28-day collection period

Various mobile devices

Many samples ([Chrome UX Report](#))

Full visit durations

Various network connections

All Chrome versions


```
<head>
  <!-- Meta -->
  <link
    rel="preload"
    href="https://cdn.../SpiegelSans4UI-Bold.woff2"
    as="font"
    type="font/woff2"
    crossorigin>
  <!-- Inline stuff, stylesheets, scripts, etc. -->
</head>
```



```
<head>
  <!-- Meta foo -->
  <link rel="preload" href="https://cdn-
    static.ecosia.org/.../Inter-Regular.woff2"
    as="font" type="font/woff2"
    crossorigin="true">
  <link rel="preload" href="https://cdn-
    static.ecosia.org/.../Inter-Medium.woff2"
    as="font" type="font/woff2"
    crossorigin="true">
  <link rel="preload" href="https://cdn-
    static.ecosia.org/.../Inter-Bold.woff2"
    as="font" type="font/woff2"
    crossorigin="true">
  <!-- More meta foo, preloads, stylesheets -->
</head>
```

**How does
font loading
affect FCP
and LCP?**

The Critical Rendering Path to Styled Text

HTML

CSS

Font

```
@font-face {  
    font-family: 'FooBar';  
    src: url(foobar.woff2)  
        format('woff2');  
}  
  
h1 {  
    font-family: 'FooBar';  
}
```

The Critical Rendering Path to Styled Text

HTML

CSS

Font

```
@font-face {  
    font-family: 'FooBar';  
    src: url(foobar.woff2)  
        format('woff2');  
    font-display: swap;  
}
```

```
h1 {  
    font-family: 'FooBar';  
}
```


The `font-display`

Timeline

User agent attempts to use a given downloaded font face. Render invisible fallback.

Block

Fallback is displayed until downloaded font face loads.

Swap

Fallback is used.

Failure

```
font-display: auto;
```

User agent attempts to use a given downloaded font face. Render invisible fallback.

Fallback is displayed until downloaded font face loads.

Fallback is used.

Block

Swap

Failure


```
font-display: block;
```

User agent attempts to use a given downloaded font face. Render invisible fallback.

Block

Fallback is displayed until downloaded font face loads.

Swap ∞

```
font-display: swap;
```

Very short block period

Infinite swap period

Block

Swap ∞


```
font-display: fallback;
```

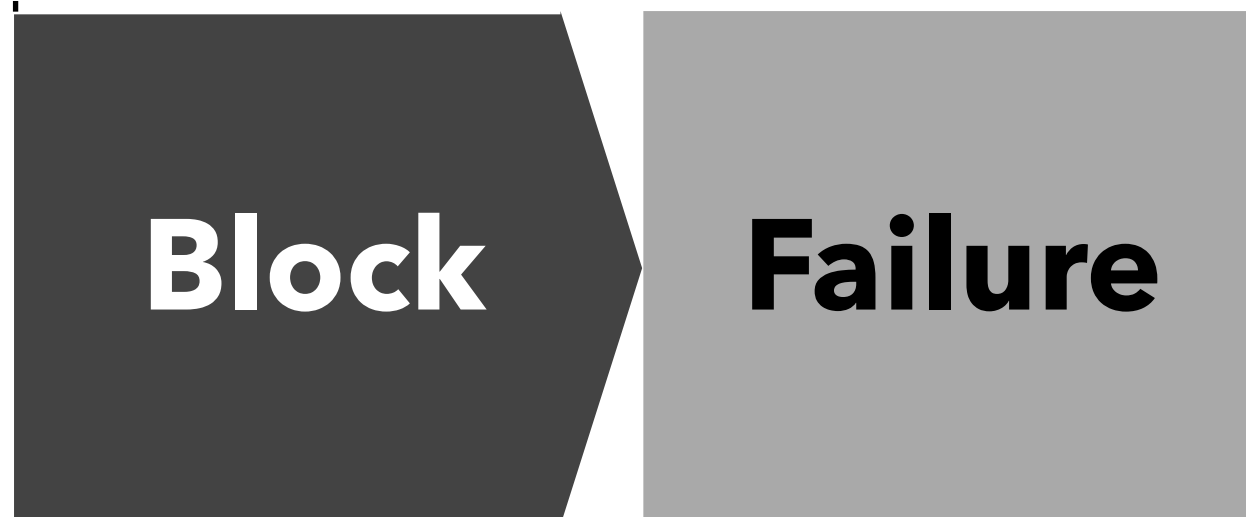
Very short block period

Short swap period



```
font-display: optional;
```

Very short block period



The Critical Rendering Path to Styled Text

HTML

CSS

Font

```
@font-face {  
    font-family: 'FooBar';  
    src: url(foobar.woff2)  
        format('woff2');  
    font-display: swap;  
}
```

```
h1 {  
    font-family: 'FooBar';  
}
```

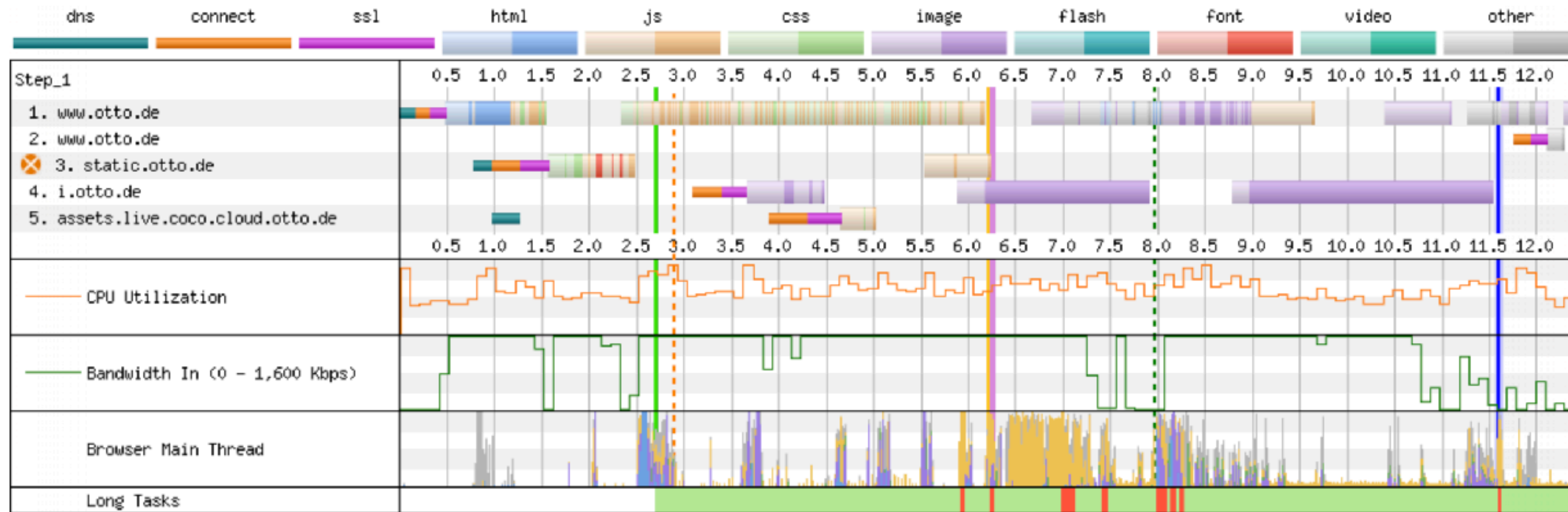

The Critical Rendering Path to Styled Text

HTML

Font

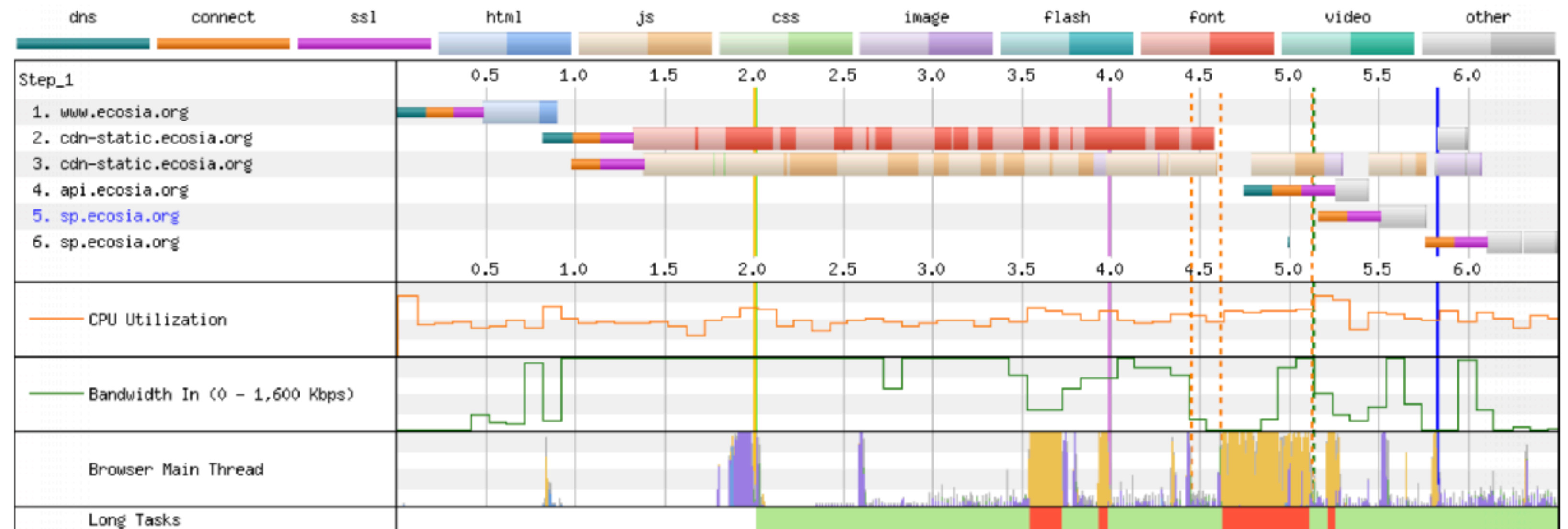
CSS

```
<head>  
  <link rel="preload"  
        href="foobar.woff2"  
        as="font" type="font/  
        woff2"  
        crossorigin="true">  
  <link rel="stylesheet"  
        href="styles.css">  
</head>
```



▲ **otto.de**

ecosia.org ▶



**How much does
FOUT affect CLS?**

CLS: 0

CLS: 0.00589...

CLS: 0.01278...

CLS: 0.08805...

CLS: 0.11662...

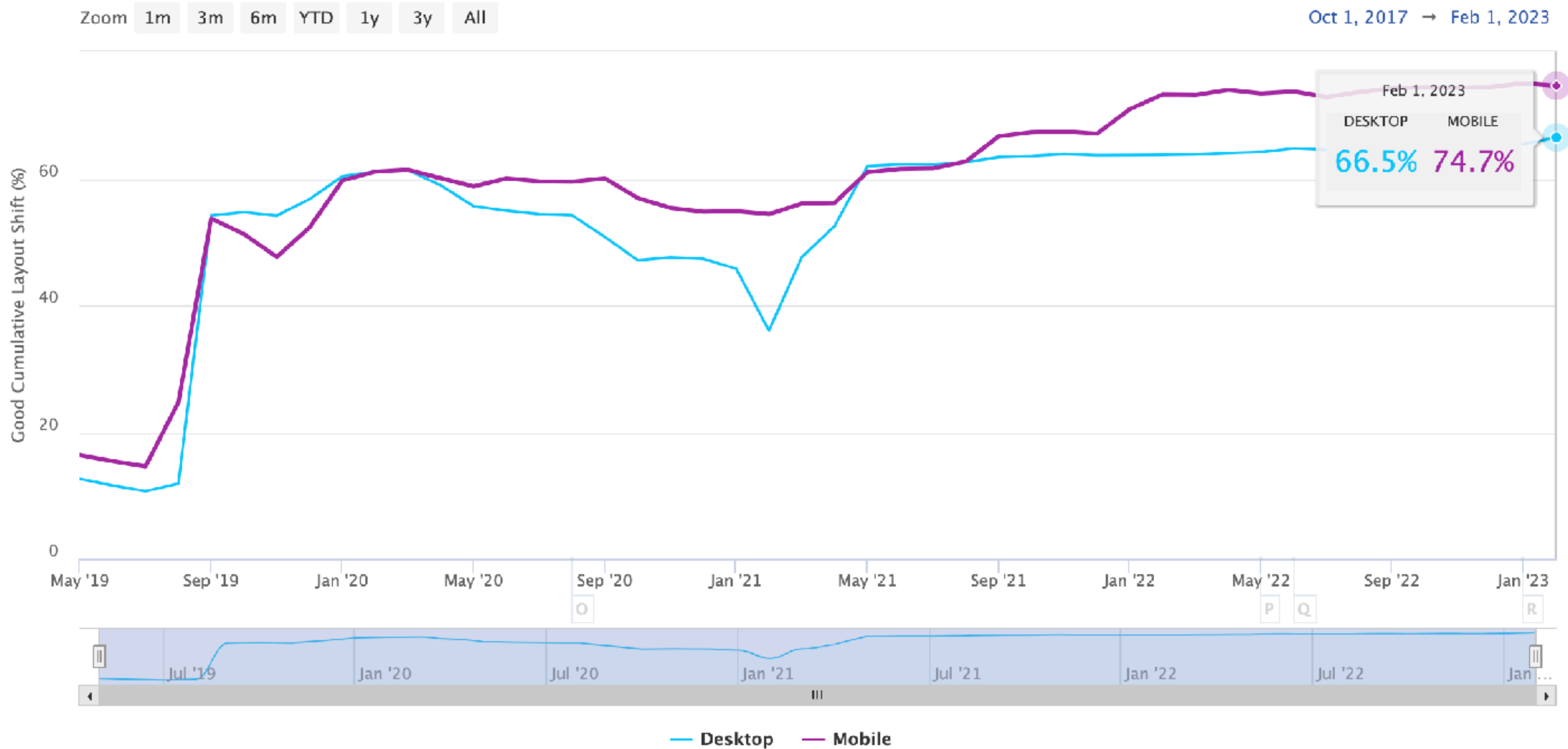
Good Cumulative Layout Shift

The percentage of origins with "good" CLS experiences, less and or equal to 0.1.

DESKTOP 66.5% ▲427.8%
MOBILE 74.7% ▲355.5%

Timeseries of Good Cumulative Layout Shift

Source: <httparchive.org>



Poor Cumulative Layout Shift

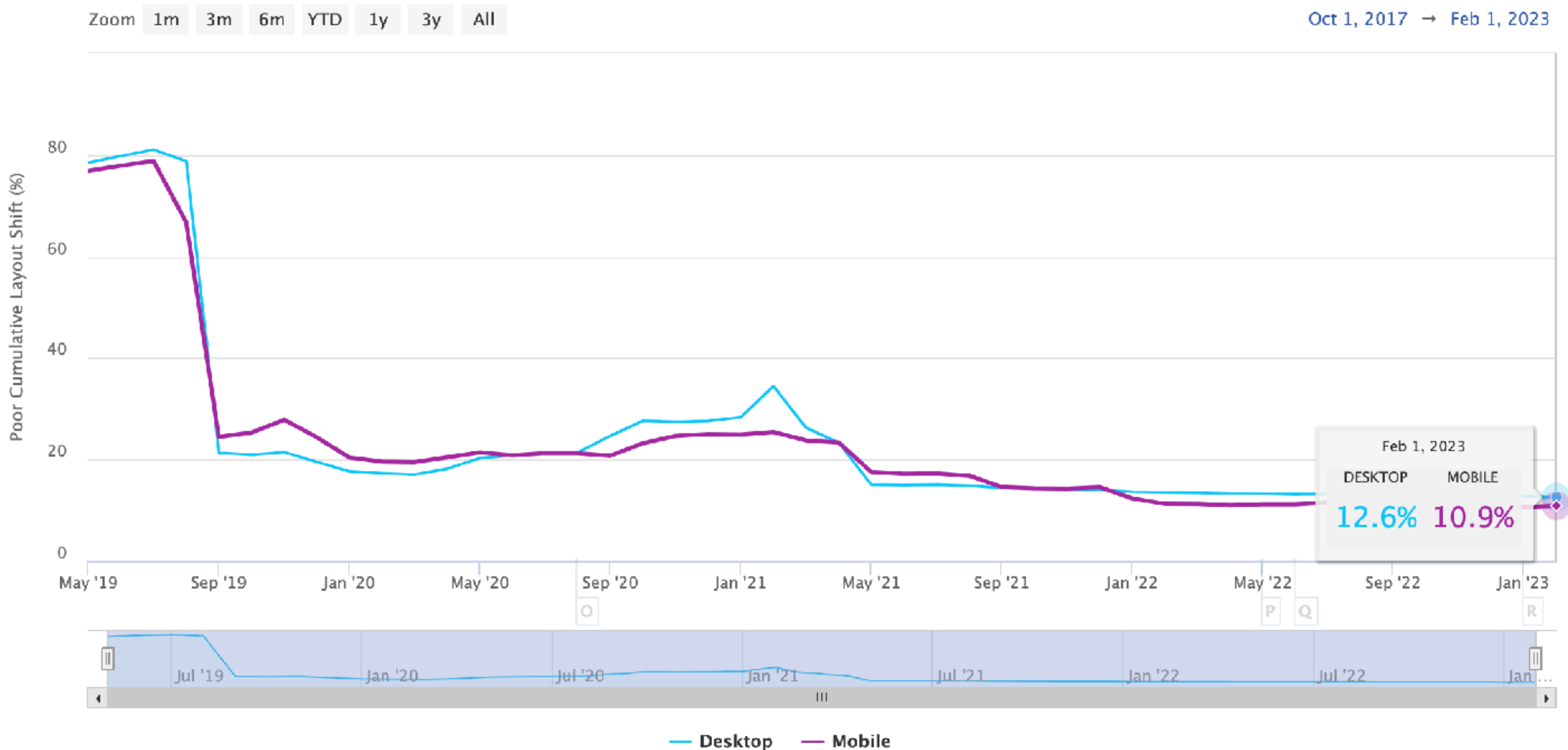
The percentage of origins with "poor" CLS experiences, greater than 0.25.

DESKTOP
12.6%
▼83.9%

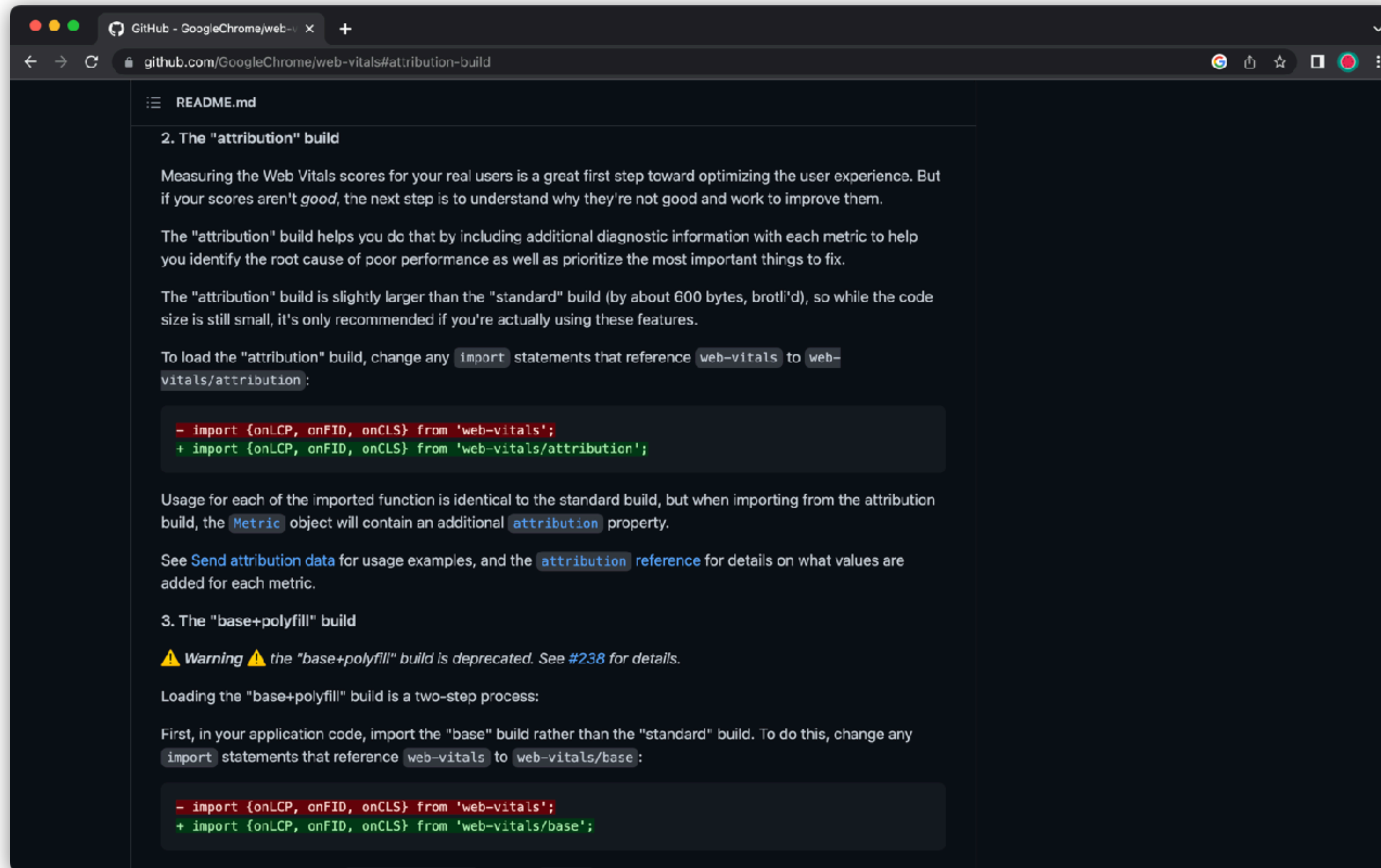
MOBILE
10.9%
▼85.8%

Timeseries of Poor Cumulative Layout Shift

Source: <httparchive.org>



The web-vitals attribution build



The screenshot shows a GitHub repository page for GoogleChrome/web-vitals. The browser's address bar shows the URL `github.com/GoogleChrome/web-vitals#attribution-build`. The page content is a README file with the following sections:

2. The "attribution" build

Measuring the Web Vitals scores for your real users is a great first step toward optimizing the user experience. But if your scores aren't *good*, the next step is to understand why they're not good and work to improve them.

The "attribution" build helps you do that by including additional diagnostic information with each metric to help you identify the root cause of poor performance as well as prioritize the most important things to fix.

The "attribution" build is slightly larger than the "standard" build (by about 600 bytes, brotl'd), so while the code size is still small, it's only recommended if you're actually using these features.

To load the "attribution" build, change any `import` statements that reference `web-vitals` to `web-vitals/attribution`:

```
- import {onLCP, onFID, onCLS} from 'web-vitals';  
+ import {onLCP, onFID, onCLS} from 'web-vitals/attribution';
```

Usage for each of the imported function is identical to the standard build, but when importing from the attribution build, the `Metric` object will contain an additional `attribution` property.

See [Send attribution data](#) for usage examples, and the [attribution reference](#) for details on what values are added for each metric.

3. The "base+polyfill" build

⚠ Warning ⚠ the "base+polyfill" build is deprecated. See [#238](#) for details.

Loading the "base+polyfill" build is a two-step process:

First, in your application code, import the "base" build rather than the "standard" build. To do this, change any `import` statements that reference `web-vitals` to `web-vitals/base`:

```
- import {onLCP, onFID, onCLS} from 'web-vitals';  
+ import {onLCP, onFID, onCLS} from 'web-vitals/base';
```


Fallback Font Demo x New Tab

localhost:8080/prototypes/fallback-font/take_3/

Then came the horses. Having four feet, these managed rather better than the foot-soldiers; but even they stumbled now and then

717 x 298

THE next moment soldiers came running through the wood, at first in twos and threes, then ten or twenty together, and at last in such crowds that they seemed to fill the whole forest. Alice got behind a tree, for fear of being run over, and watched them go by. She thought that in all her life she had never seen soldiers so uncertain on their feet: they were always tripping over something or other, and whenever one went down, several more always fell over him, so that the ground was soon covered with little heaps of men. Then came the horses. Having four feet, these managed rather better than the foot-soldiers; but even they stumbled now and then; and it seemed to be a regular rule that, whenever a horse stumbled, the rider fell off instantly. The confusion got worse every moment, and Alice was very glad to get out of the wood into an open place, where she found the white King seated on the ground, busily writing in his memorandum-book. 'I've sent them all!' the King cried in a tone of delight, on seeing Alice. 'Did you happen to meet any soldiers, my dear, as you came through the wood?' 'Yes, I did,' said Alice: 'several thousand, I should think.' 'Four thousand two hundred and seven, that's the exact number,' the King said, referring to his book. 'I couldn't send all the horses, you know, because two of them are wanted in the game. And I haven't sent the two Messengers, either. They're both gone to the town. Just look along the road, and tell me if you can see either of them.' 'I see nobody on the road,' said Alice. 'I only wish I had such eyes,' the King remarked in a fretful tone. 'To be able to see Nobody! And at the distance too! Why, it's as much as I can do to see real people, by this light!'

Elements Console Sources Network Performance Memory Application

web-vitals-attribution.js:1

```
{name: 'CLS', value: 0.05606038427275672, rating: 'good', delta: 0.05606038427275672, entries: Array(1), ...}
```

- attribution:
 - largestShiftEntry: LayoutShift {value: 0.05606038427275672, hadRecentInput: false, lastInputTime: ...}
 - largestShiftSource: LayoutShiftAttribution
 - currentRect: DOMRectReadOnly {x: 18, y: 533, width: 1434, height: 596, top: 533, ...}
 - node: p
 - previousRect: DOMRectReadOnly {x: 18, y: 330, width: 1434, height: 596, top: 330, ...}
 - [[Prototype]]: LayoutShiftAttribution
 - largestShiftTarget: "html>body>p"
 - largestShiftTime: 1235
 - largestShiftValue: 0.05606038427275672
 - loadState: "dom-content-loaded"
 - [[Prototype]]: Object
 - delta: 0.05606038427275672
- entries: Array(1)
 - 0: LayoutShift
 - duration: 0
 - entryType: "layout-shift"
 - hadRecentInput: false
 - lastInputTime: 0
 - name: ""
 - navigationId: 1
 - source: Window {window: Window, self: Window, document: document, name: "", location: Location, ...}
 - sources: [LayoutShiftAttribution]
 - startTime: 1235
 - value: 0.05606038427275672
 - [[Prototype]]: LayoutShift
 - length: 1
 - [[Prototype]]: Array(0)
 - id: "v3-1678900126318-2318762359786"
 - name: "CLS"
 - navigationType: "navigate"
 - rating: "good"
 - value: 0.05606038427275672
 - [[Prototype]]: Object

Console Coverage Animations Issues Performance monitor What's New Rendering

Horses. Having managed than the foot- en they and then

wood, at first in twos and threes, then ten or twenty to fill the whole forest. Alice got behind a tree, for fear of that in all her life she had never seen soldiers so r something or other, and whenever one went down, was soon covered with little heaps of men. Then came tter than the foot-soldiers; but even they stumbled now never a horse stumbled, the rider fell off instantly. The ry glad to get out of the wood into an open place, where y writing in his memorandum-book. 'I've sent them all!' did you happen to meet any soldiers, my dear, as you came ousand, I should think.' 'Four thousand two hundred and g to his book. 'I couldn't send all the horses, you know, haven't sent the two Messengers, either. They're both gone ou can see either of them.' 'I see nobody on the road,' said d in a fretful tone. 'To be able to see Nobody! And at the people, by this light!'

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{name: 'CLS', value: 0.05606038427275672, rating: 'good', delta: 0.05606038427275672, entries: Array
(1), ...} ⓘ
  attribution:
    ▶ LargestShiftEntry: LayoutShift {value: 0.05606038427275672, hadRecentInput: false, lastInputTime: 0}
    ▼ LargestShiftSource: LayoutShiftAttribution
      ▶ currentRect: DOMRectReadOnly {x: 18, y: 533, width: 1434, height: 596, top: 533, ...}
      ▶ node: p
      ▶ previousRect: DOMRectReadOnly {x: 18, y: 330, width: 1434, height: 596, top: 330, ...}
      ▶ [[Prototype]]: LayoutShiftAttribution
      LargestShiftTarget: "html>body>p"
      LargestShiftTime: 1235
      LargestShiftValue: 0.05606038427275672
      LoadState: "dom-content-loaded"
      ▶ [[Prototype]]: Object
      delta: 0.05606038427275672
    ▼ entries: Array(1)
      ▼ 0: LayoutShift
        duration: 0
        entryType: "layout-shift"
        hadRecentInput: false
        lastInputTime: 0
        name: ""
        navigationId: 1
        ▶ source: Window {window: Window, self: Window, document: document, name: '', location: Location, ...}
        ▶ sources: [LayoutShiftAttribution]
        startTime: 1235
        value: 0.05606038427275672
        ▶ [[Prototype]]: LayoutShift
        length: 1
        ▶ [[Prototype]]: Array(0)
      id: "v3-1678900126318-2318762359786"
      name: "CLS"
      navigationType: "navigate"
      rating: "good"
      value: 0.05606038427275672
      ▶ [[Prototype]]: Object
```

>

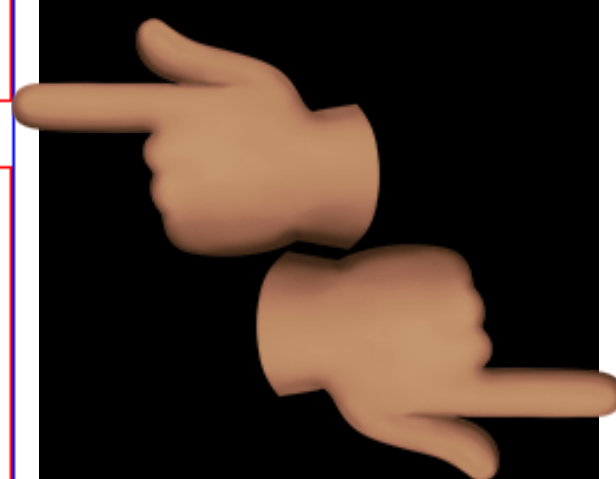
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  attribution:
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      node: p
      previousRect: DOMRectReadOnly {x: 18, y: 330, width: 1434, height: 596, top: 330, ...}
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      loadState: "dom-content-loaded"
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  delta: 0.05606038427275672
  entries: Array(1)
    0: LayoutShift
      duration: 0
      entryType: "layout-shift"
      hadRecentInput: false
      lastInputTime: 0
      name: ""
      navigationId: 1
      source: Window {window: Window, self: Window, document: document, name: '', location: Location, ...}
      sources: [LayoutShiftAttribution]
      startTime: 1235
      value: 0.05606038427275672
      [[Prototype]]: LayoutShift
      length: 1
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  id: "v3-1678900126318-2318762359786"
  name: "CLS"
  navigationType: "navigate"
  rating: "good"
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  [[Prototype]]: Object
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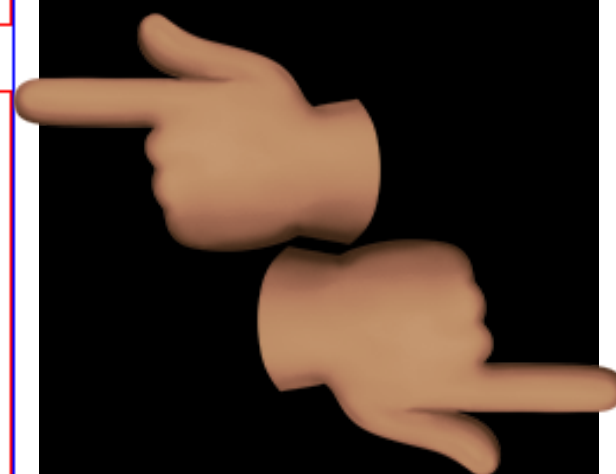


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CLS attribution

**doesn't point to the *shifter elements*;
it points to the *shifted elements*.**

**How much does
FOUT affect CLS?**

How much does FOUT affect CLS?

It depends.



Viewport

Size of shifted elements *
amount of shift

Font differences

Traffic and network
conditions

FALLBACK FONTS

fallback fonts

"An easy fix"

Overrides for @font-face

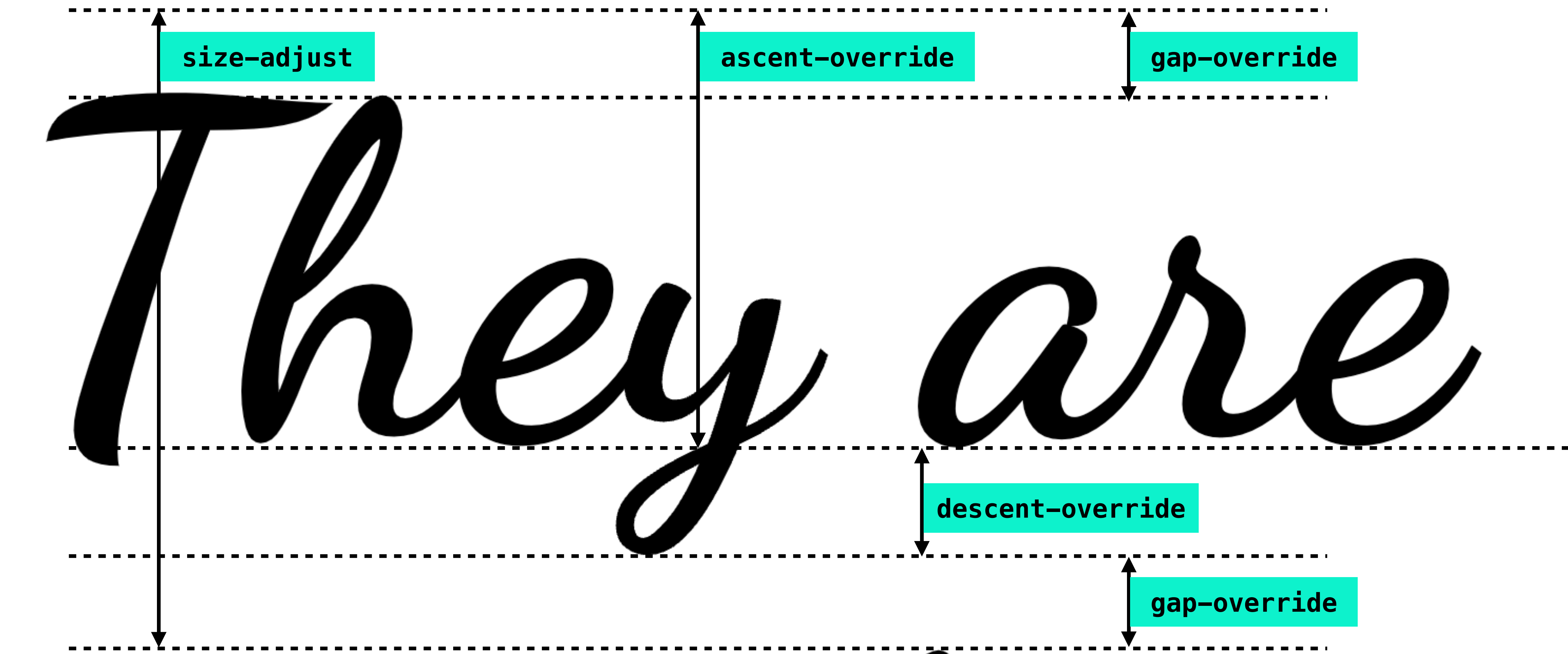
size-adjust

ascent-override

descent-override

gap-override





watching

size-adjust

They are

watching

size-adjust

They are

ing

size-adjust

They are

watching

size-adjust

ascent-override

They are

watching

size-adjust

ascent-override

They are

by

size-adjust

ascent-override

They are

watching

They are

size-adjust

ascent-override

descent-override

watching

size-adjust

ascent-override

descent-override

They are

up to him

They are

size-adjust

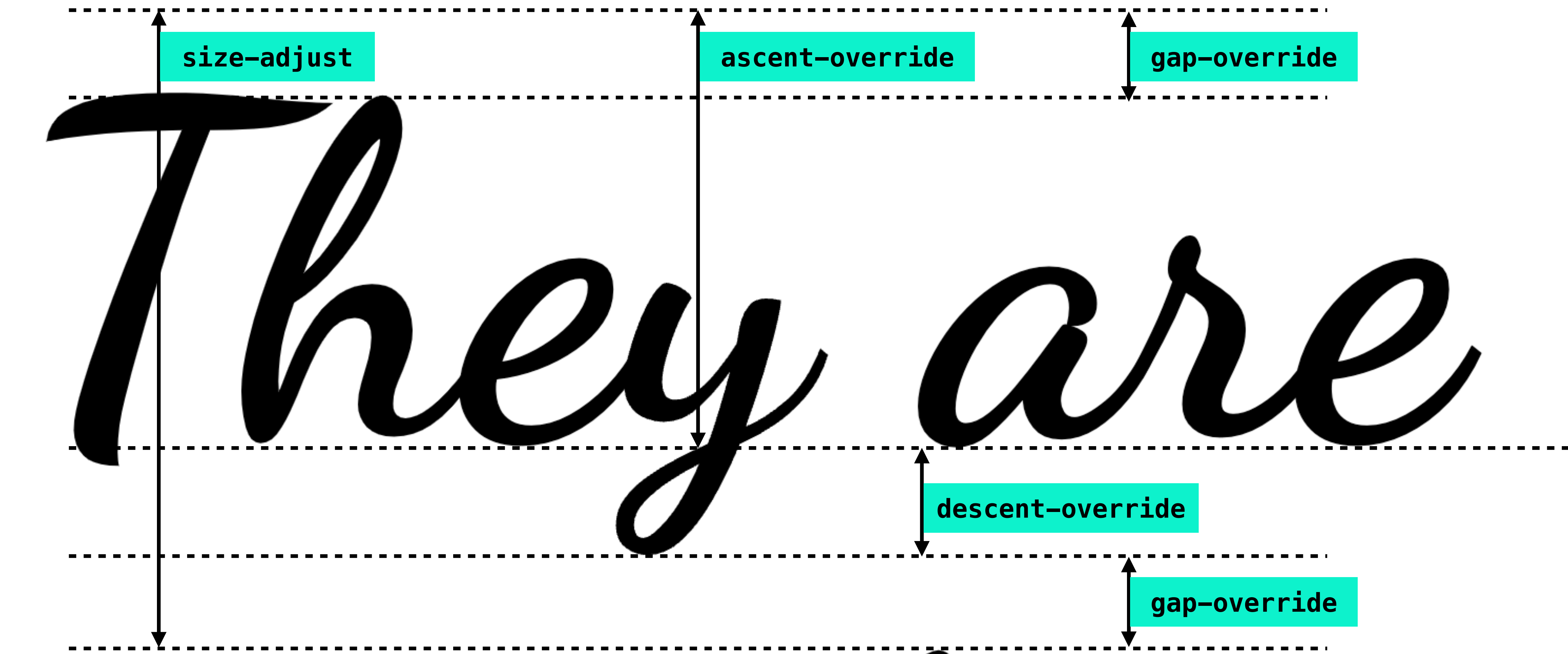
ascent-override

descent-override

watching







watching

Browser tabs: Browse Fonts - Google Fonts

Address bar: fonts.google.com/?preview.text=The%20quick%20brown%20fox%20jumped%20over%20the%20lazy%20brown%20dog&preview.text_type=custom

Navigation: Fonts, Icons, Knowledge, FAQ

Search: Search fonts

Preview: Custom The quick brown fox jumped over the lazy brown dog 40px

Filters: Categories, Language, Number of styles, Show only variable fonts, Show only color fonts

Results: 1493 of 1493 families. Sort by: Trending

Font Family	Designer	Number of Styles	Preview Text
Roboto	Christian Robertson	12 styles	The quick brown fox jumped over the lazy brown dog
Noto Sans Lepcha	Google	1 style	The quick brown fox jumped over the lazy brown dog
Noto Sans Avestan	Google	1 style	The quick brown fox jumped over the lazy brown dog
Noto Serif Lao	Google	Variable (2 axes)	The quick brown fox jumped over the
Open Sans	Steve Matteson	Variable (2 axes)	The quick brown fox jumped over the lazy brown dog
Noto Sans Japanese	Google	6 styles	The quick brown fox jumped over the lazy brown dog

Brand Font

They are
watching

System Fallback Font

They are

watching

```
/* Without custom fallback */

@font-face {
    font-family: 'DancingScript';
    src: url(DancingScript.woff2)
        format('woff2');
    font-display: swap;
}

h1 {
    font-family: 'DancingScript';
}
```

```
/* Without custom fallback */

@font-face {
  font-family: 'DancingScript';
  src: url(DancingScript.woff2)
       format('woff2');
  font-display: swap;
}

h1 {
  font-family: 'DancingScript',
              'Brush Script MT', 'Times New
              Roman', serif;
}
```



```
/* With custom fallback */
```

```
@font-face {  
  font-family: 'DancingScript';  
  src: url(DancingScript.woff2) format('woff2');  
  font-display: swap;  
}
```

```
@font-face {  
  font-family: 'Adjusted Times New Roman Fallback';  
  src: local(Times New Roman);  
  size-adjust: 92%;  
  ascent-override: 97%;  
  descent-override: 29%;  
  line-gap-override: normal;  
}
```

```
h1 {  
  font-family: 'DancingScript', 'Adjusted Times New Roman  
  Fallback';  
}
```

They are

watching

Without Custom Fallback

They are

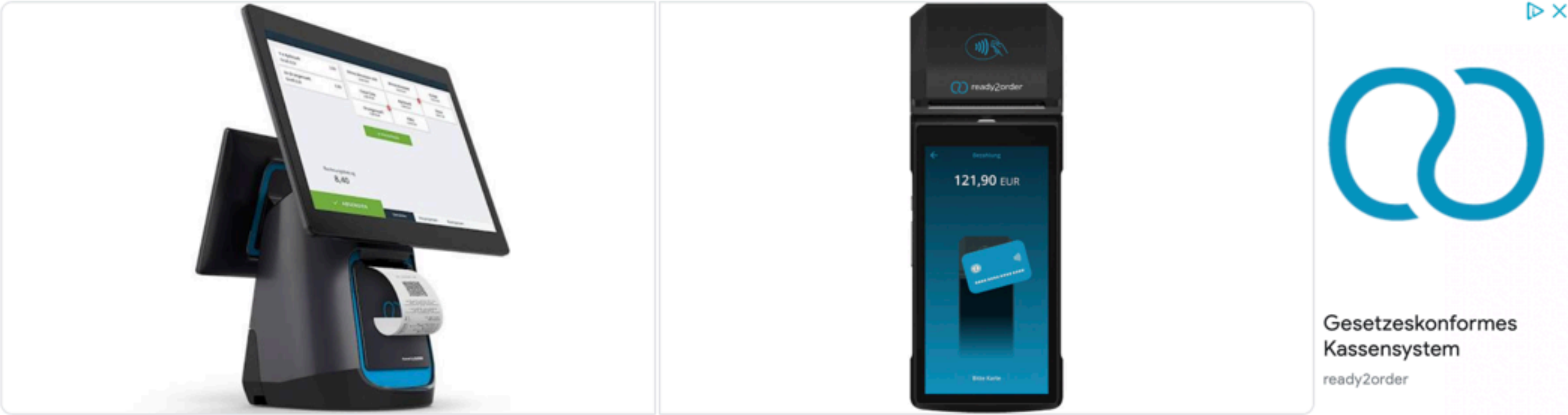
With Custom Fallback

watching

cssfontstack.com

CSS Fonts
From Dan's Tools

Web Dev Conversion Encode/Decoders Formatters Internet Join Login




Gesetzeskonformes Kassensystem
ready2order

Related Tools:
 > Web Fonts
 > HTML Color Codes
 > .htaccess Generator

A complete collection of web safe CSS font stacks.

Sans-serif

Arial		Arial Black		Arial Narrow		Arial Rounded MT Bold	
Win: 99.84% Mac: 98.74%		Win: 98.08% Mac: 96.22%		Win: 88.39% Mac: 94.77%		Win: 59.53% Mac: 95.14%	
Avant Garde		Calibri		Candara		Century Gothic	
Win: 0% Mac: 1.08%		Win: 83.41% Mac: 38.74%		Win: 83.08% Mac: 34.41%		Win: 87.62% Mac: 53.15%	
Franklin Gothic Medium		Futura		Geneva		Gill Sans	
Win: 99.18% Mac: 2.1%		Win: 1.26% Mac: 94.41%		Win: 2.08% Mac: 99.64%		Win: 58.54% Mac: 95.5%	



Mehr Wir für Dich.
Und Deine Pläne.

<https://www.cssfontstack.com>

TOOLS
tools

Fallback Font Generator

Reduce Cumulative Layout Shift (CLS) by adjusting web fonts and system font fallbacks using special `@font-face` descriptors. [See demo.](#)

Not supported in Safari at this time :-)

The Lion and the Unicorn

Fallback Font (adjusted)
Unicorn

Brand Font

Preview

Toggle Brand Font

Brand Font

Drop font here

Upload

Fallback Font

Arial

Adjust Fallback

Adjust Size

Ascent Override

Descent Override

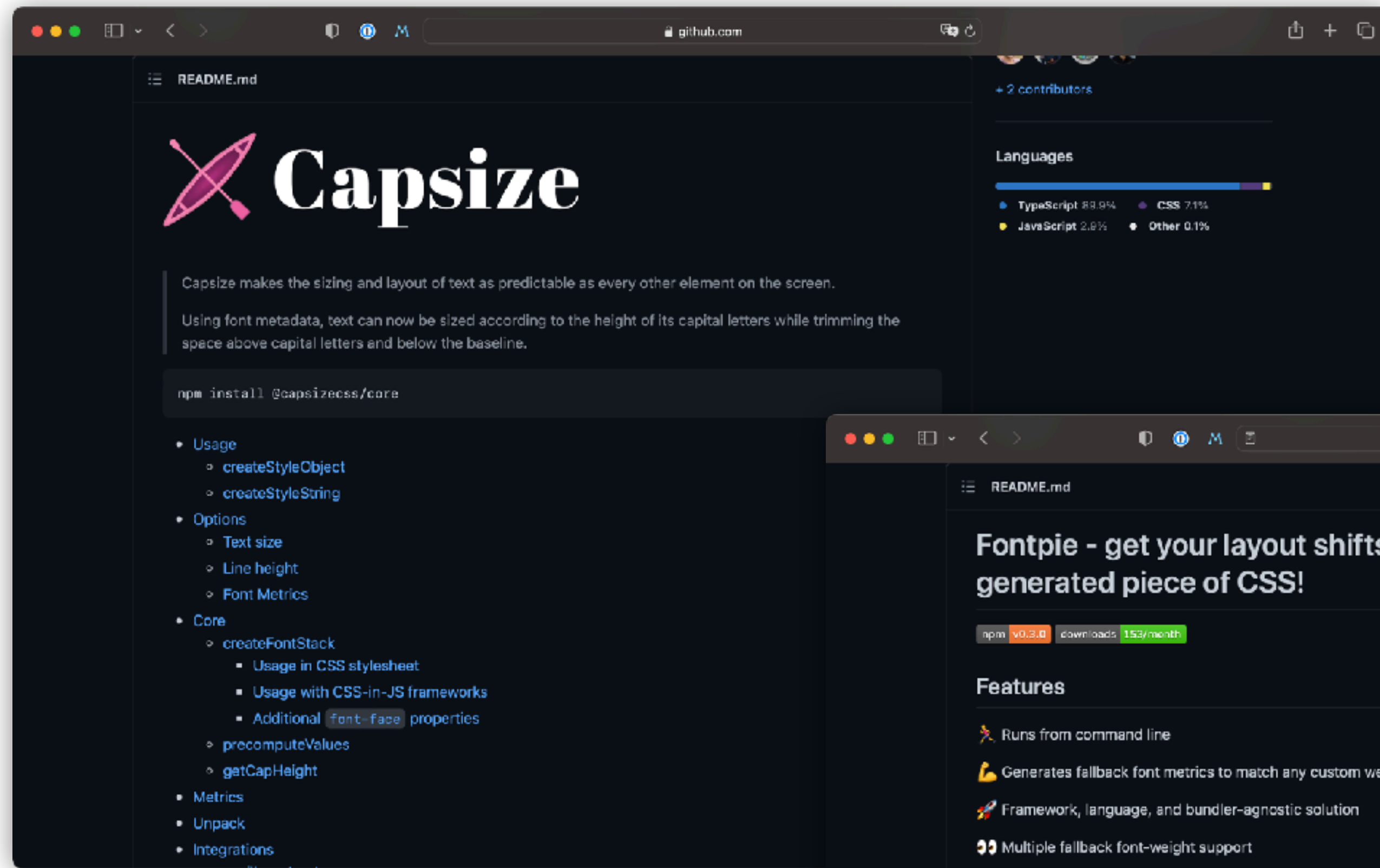
Line-Gap Override

Your CSS rules

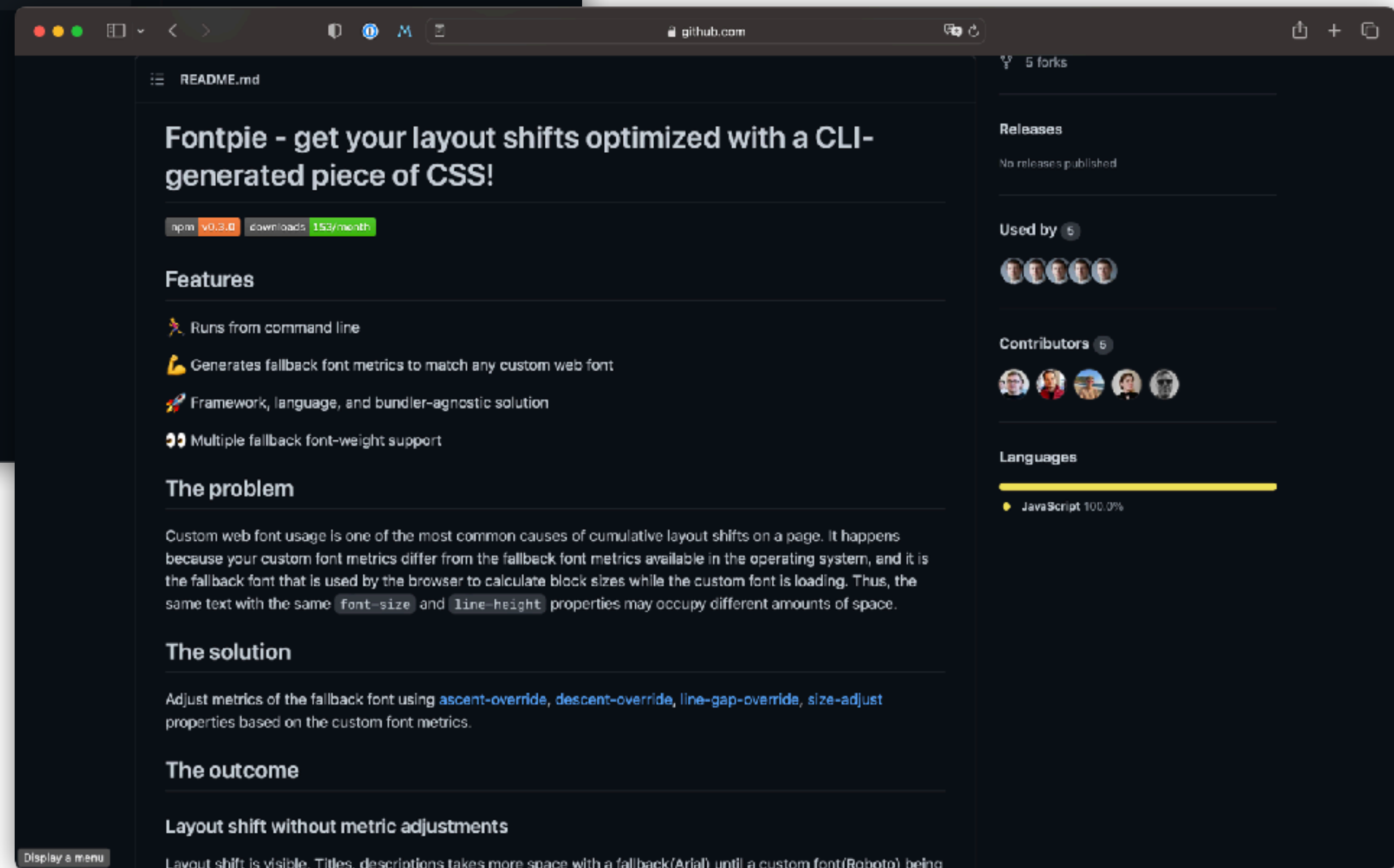
```
@font-face {
  font-family: 'Adjusted Arial Fallback';
  src: local(Arial);
  size-adjust: 100%;
  ascent-override: normal;
  descent-override: normal;
  line-gap-override: normal;
}

h1 {
  font-family: 'FredokaOne-Regular', 'Adjusted Arial Fallback';
}
```

Copy

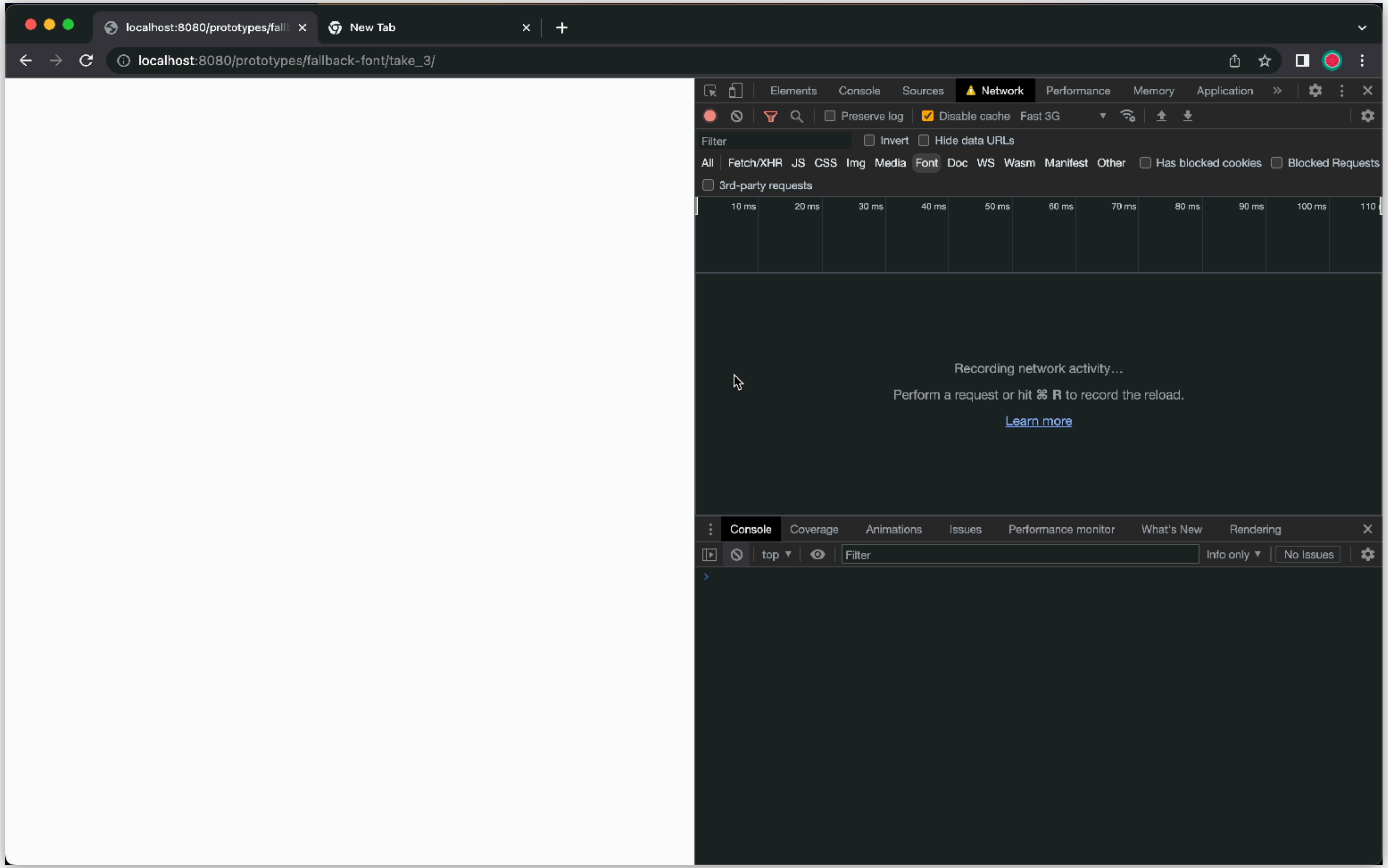


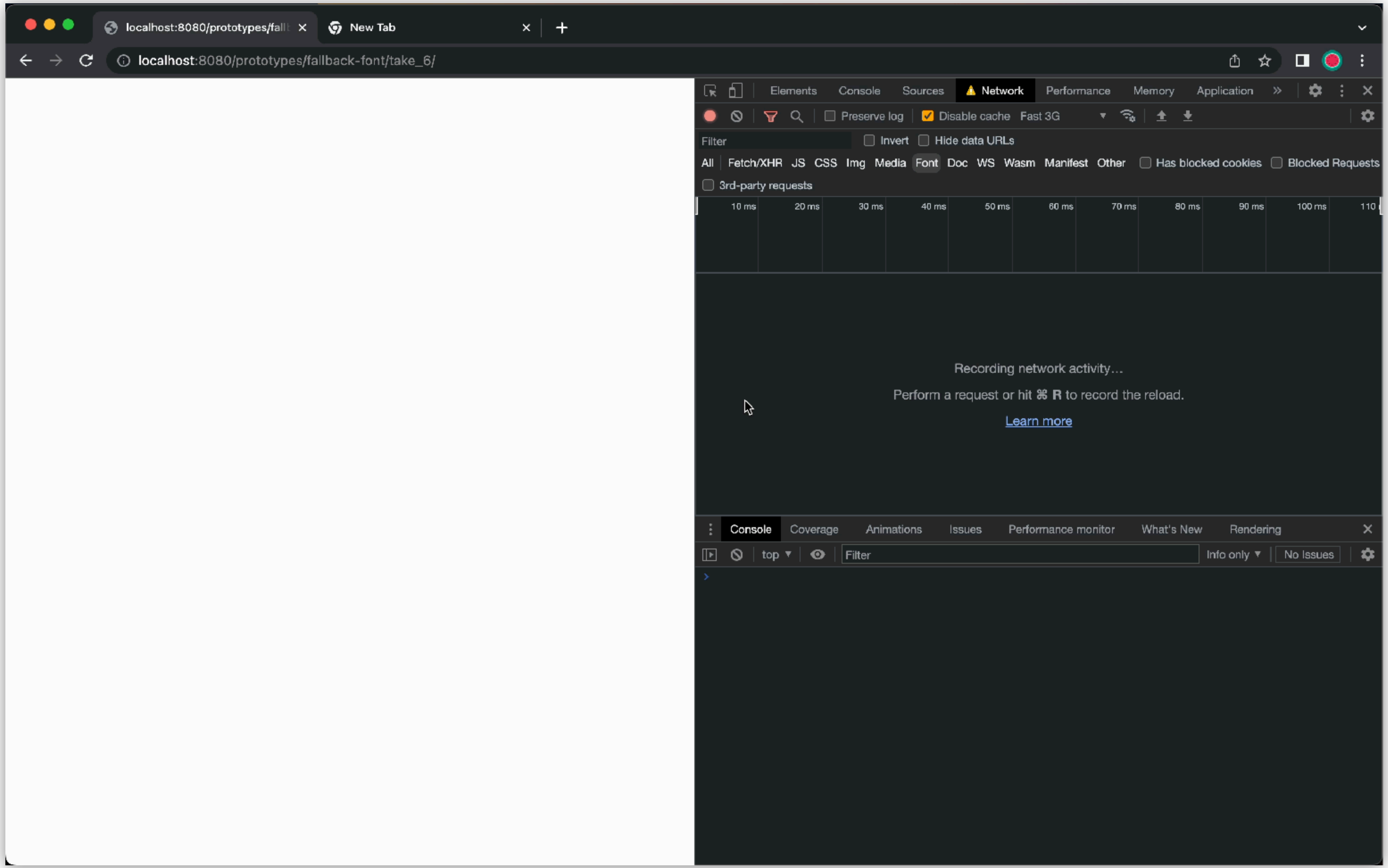
▲ Capsize



Fontpie ▶

EXAMPLES
examples





```
<head>
  <!-- Meta stuff -->
  <!-- Inline scripts -->
  <!-- Linked scripts -->
  <link rel="preload" href="https://static.otto.de/.../
    fonts.579efd13.css" as="style"
    onload="invokePreload.onStyleLoad(this)"
    crossorigin="anonymous">
  <link rel="preload" name="OttoSans" as="font" weight="400"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../otto-sans_fb84ead3.woff2"/>
  <link rel="preload" name="OttoSans" as="font" weight="700"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../otto-sans-bold_b7bb08ce.woff2"/>
  <link rel="preload" name="OttoIconFonts" as="font" weight="400"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../OTTO-Icons_8a586867.woff2"/>
  <link rel="preload" name="OttoIcons" as="font" weight="400"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../OTTO-Icons_8a586867.woff2"/>
  <!-- More preloads, linked stylesheets, inline styles, more meta -->
</head>
```

```
<head>
  <!-- Meta stuff -->
  <!-- Inline scripts -->
  <!-- Linked scripts -->
  <link rel="preload" href="https://static.otto.de/.../
    fonts.579efd13.css" as="style"
    onload="invokePreload.onStyleLoad(this)"
    crossorigin="anonymous">
  <link rel="preload" name="OttoSans" as="font" weight="400"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../otto-sans_fb84ead3.woff2"/>
  <link rel="preload" name="OttoSans" as="font" weight="700"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../otto-sans-bold_b7bb08ce.woff2"/>
  <link rel="preload" name="OttoIconFonts" as="font" weight="400"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../OTT0-Icons_8a586867.woff2"/>
  <link rel="preload" name="OttoIcons" as="font" weight="400"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../OTT0-Icons_8a586867.woff2"/>
  <!-- More preloads, linked stylesheets, inline styles, more meta -->
</head>
```



```
<head>
  <!-- Meta stuff -->
  <!-- Inline scripts -->
  <!-- Linked scripts -->
  <link rel="preload" href="https://static.otto.de/.../
    fonts.579efd13.css" as="style"
    onload="invokePreload.onStyleLoad(this)"
    crossorigin="anonymous">
  <link rel="preload" name="OttoSans" as="font" weight="400"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../otto-sans_1b64ead3.woff2"/>
  <link rel="preload" name="OttoSans" as="font" weight="700"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../otto-sans-bold_7103ce.woff2"/>
  <link rel="preload" name="OttoIconFonts" as="font" weight="400"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../OTTO-Icons_8a586867.woff2"/>
  <link rel="preload" name="OttoIcons" as="font" weight="400"
    crossorigin="anonymous" type="font/woff2" href="https://
    static.otto.de/.../OTTO-Icons_8a586867.woff2"/>
  <!-- More preloads, linked stylesheets, inline styles, more meta -->
</head>
```

**To preload or not to preload?
That is the question.**

WebPageTest - Website Perform... X +

webpagetest.org

WebPageTest by catchpoint

Start Test Test History Products Pricing Resources About

Pro My Account Logout

Welcome to **WebPageTest** **Pro**

You're ready to go! Enjoy premium locations, bulk runs, test priority, our API, & No-Code Experiments!

Start a **Site Performance** Test!

Enter a website URL...

Simple Configuration 3 test runs from recommended location and browser presets

MOBILE 4G Virginia, US

DESKTOP Cable Virginia, US

Include Repeat View
(Loads the page, closes the browser and then loads the page again)

Run Lighthouse Audit

941 Runs Left | [Upgrade](#)

Start Test →

WebPageTest - Website Perform... x +

otto.de : Chrome - ...furt, Germa... x +

webpagetest.org/result/230315_BiDcNY_AG3/0/experiments/

Remove Preloads

This experiment removes specified unused preloads from the page, allowing other critical resources to be requested earlier.

Run this Experiment with...

File/URL

File/URL

File/URL

File/URL

[Add more](#)

Preconnect Domains

This experiment will add a `link` with `rel="preconnect"` for specified hosts, which saves time for those steps when the resource is later requested.

Run this Experiment with...

Lazy Load Images

This experiment adds `loading="lazy"` attributes to specified images.

Run this Experiment with...

Remove Lazy Loading

This experiment removes `loading="lazy"` attributes from specified images.

Run this Experiment with...

Minify CSS

1 experiment selected. Experiment Runs: (10 total runs)
Each experiment run uses 2 test runs (1 experiment, 1 control) for each first & repeat view

[Re-Run Test with Experiments](#)

Experiment



0.0

Original (Control Run)



0.0

URL: <https://www.otto.de/p/kaercher-nass-trocken-saugroboter-rcv-3-beu-tellos-app-steuerung-fuer-niederflorige-teppichboeden-und-hartflaechen-1710593943/#variationId=1710594556>

DATE: 15/03/2023, 13:30:34

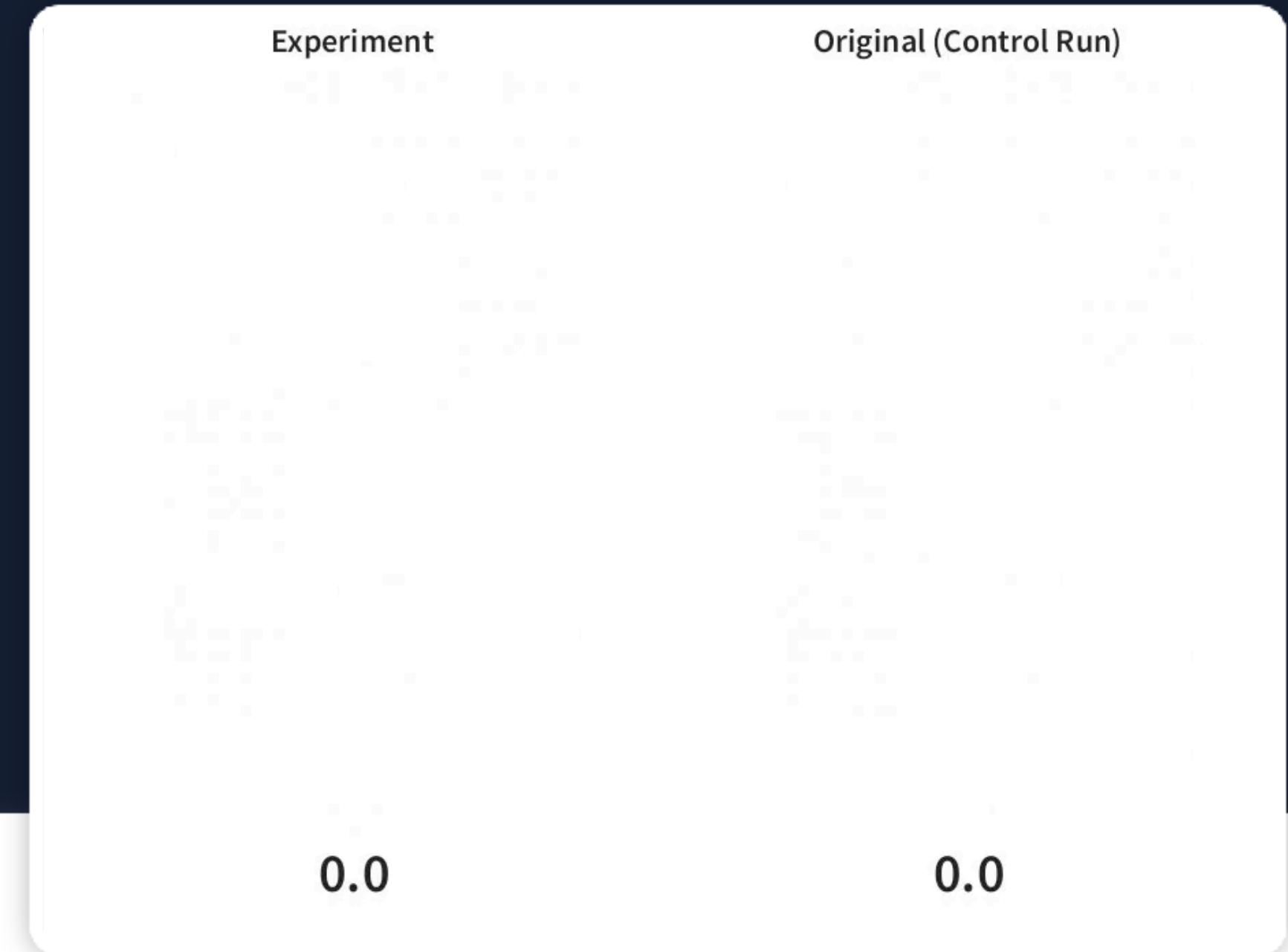
WebPageTest **Pro** Experiment

Experiment **SETTINGS:** GALAXYS8 v111 3GFast Frankfurt, Germany [More](#) ▾

[Share](#) ▾

View: [Experiment Results & Filmstrip](#) ▾

Tools: [Export](#) ▾



Experiment Results

EXPERIMENTS APPLIED: [Remove Preloads](#) ▾ [Experiment More](#)

LINKS: [Experiment Results](#) [Experiment](#) [Control](#) [Original](#)

URL: <https://www.otto.de/p/kaercher-nass-trocken-saugroboter-rcv-3-beu-tellos-app-steuerung-fuer-niederflorige-teppichboeden-und-hartflaechen-1710593943/#variationId=1710594556>

DATE: 15/03/2023, 13:30:34

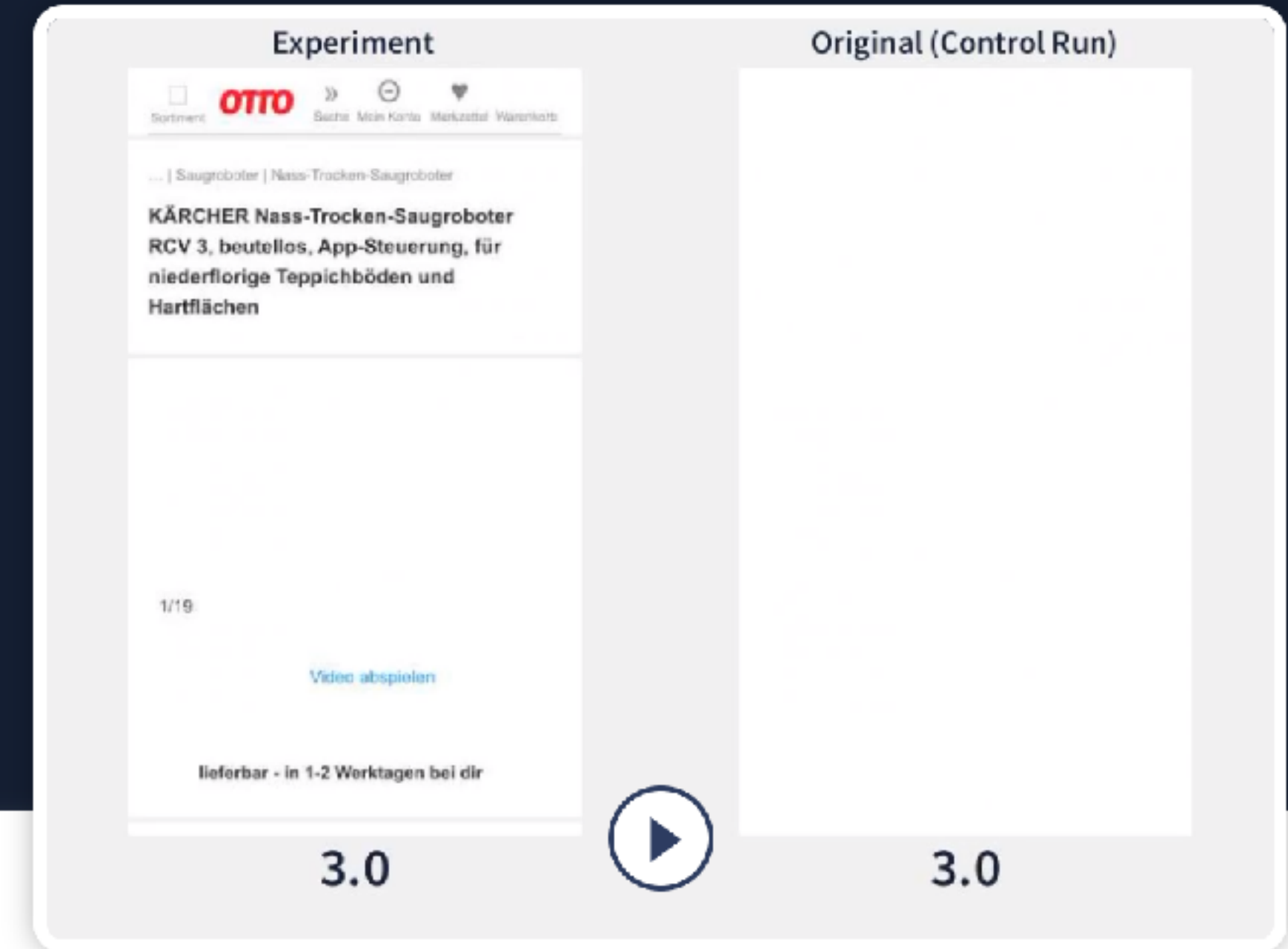
WebPageTest **Pro** Experiment

Experiment **SETTINGS:** GALAXYS8 v111 3GFast Frankfurt, Germany [More](#) ▾

[Share](#) ▾

View: [Experiment Results & Filmstrip](#) ▾

Tools: [Export](#) ▾



Experiment Results

EXPERIMENTS APPLIED: [Remove Preloads](#) ▾ [Experiment More](#)

LINKS: [Experiment Results](#) [Experiment](#) [Control](#) [Original](#)

Experiment Results

EXPERIMENTS APPLIED:

[Remove Preloads](#) ▾

[Experiment More](#)

LINKS:

[Experiment Results](#)

[Experiment](#)

[Control](#)

[Original](#)

Experiment Impact

(Notable changes between experiment and control)

Start Render	First Contentful Paint	Speed Index	Largest Contentful Paint	Cumulative Layout Shift	Total Blocking Time	Visual Complete	Fully Loaded	Page Weight
0.38s FASTER	0.32s FASTER	0.01s FASTER	0.24s FASTER	0.021 BETTER	0.12s SLOWER	3.82s SLOWER	0.09s FASTER	17 KB HEAVIER
Experiment: 1.7s Control: 2.07s	Experiment: 1.71s Control: 2.03s	Experiment: 6.5s Control: 6.51s	Experiment: 7.58s Control: 7.82s	Experiment: 0.004 Control: 0.025	Experiment: 0.35s Control: 0.24s	Experiment: 11.7s Control: 7.87s	Experiment: 12.5s Control: 12.6s	Experiment: 1593KB Control: 1576KB

Note: The metric comparisons above exclude differences in response time that exist between the median experiment and control runs of this experiment. [View this comparison with TTFB differences included.](#)

Remaining Opportunities

Here's how your overall opportunities look after this experiment:

Is it Quick? ⚠️ Not bad...



Is it Usable? ❗ Needs Improvement.

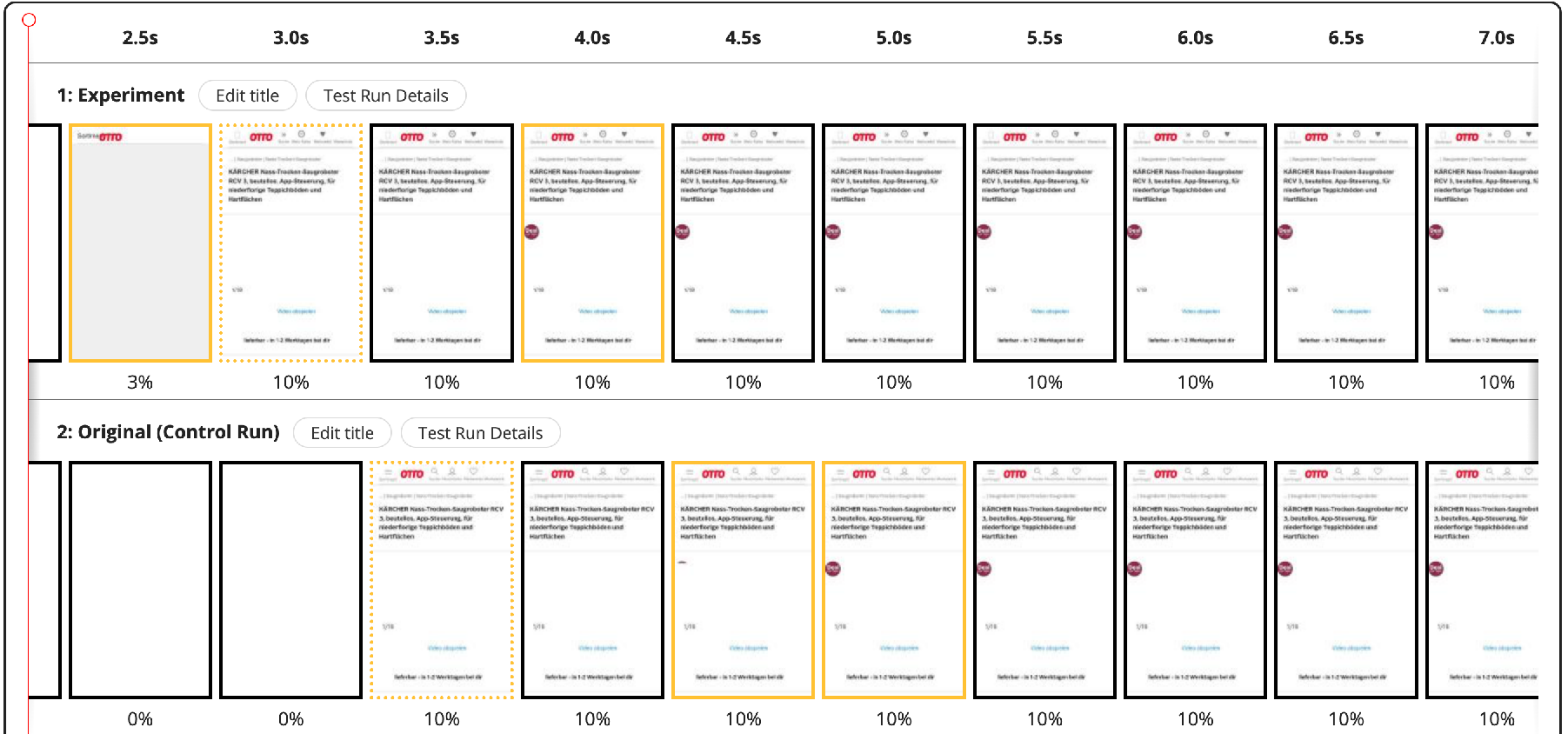


Filmstrip Comparison

(Experiment vs. Control)

Filmstrip key:  Visual change  Visual change + Layout Shift  Largest Contentful Paint  Largest Contentful Paint + Layout Shift

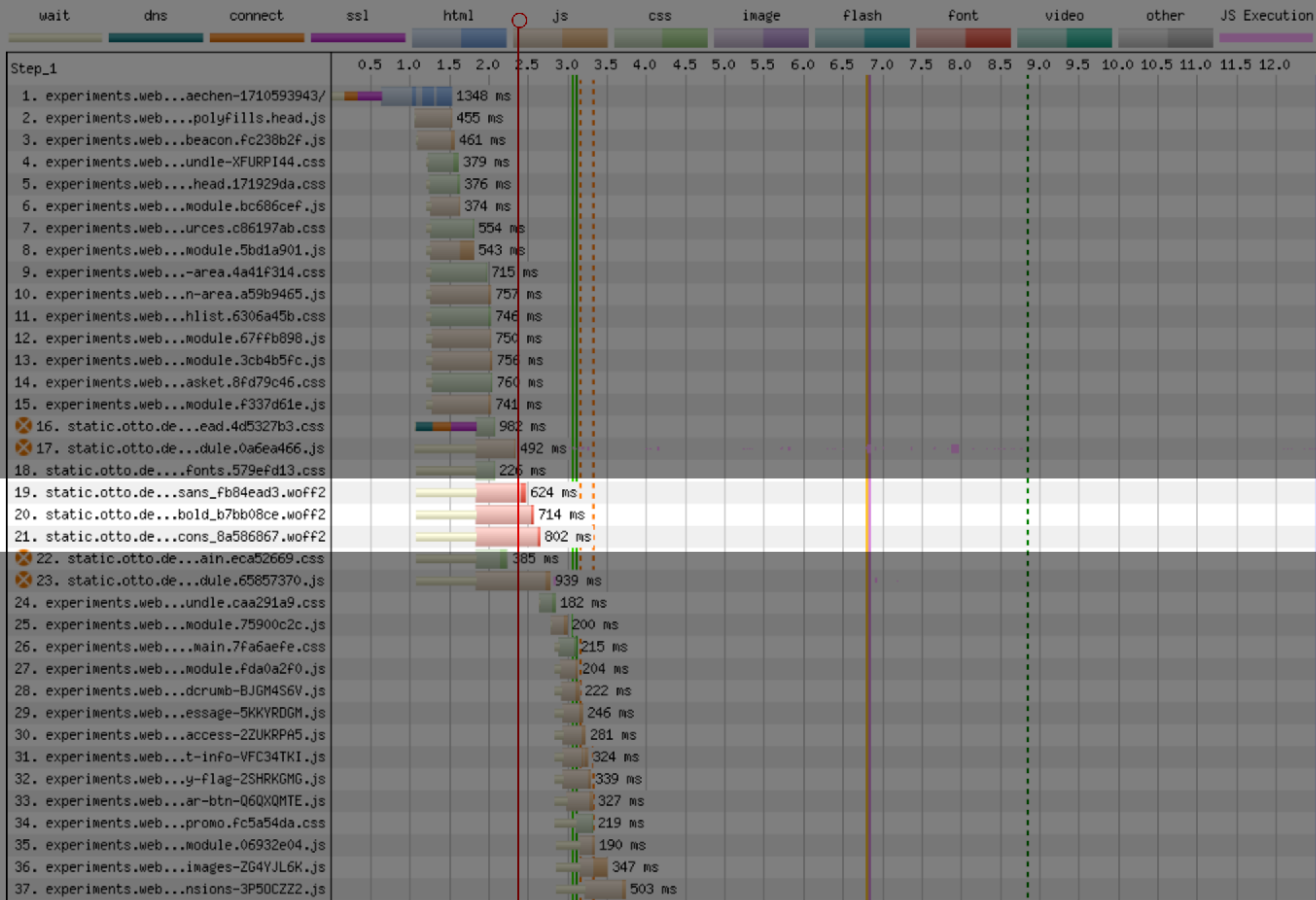
[+ Adjust Filmstrip Settings](#)



▼ Waterfall Opacity (Adjust the transparency of each run's waterfall)

Experiment

Original (Control Run)

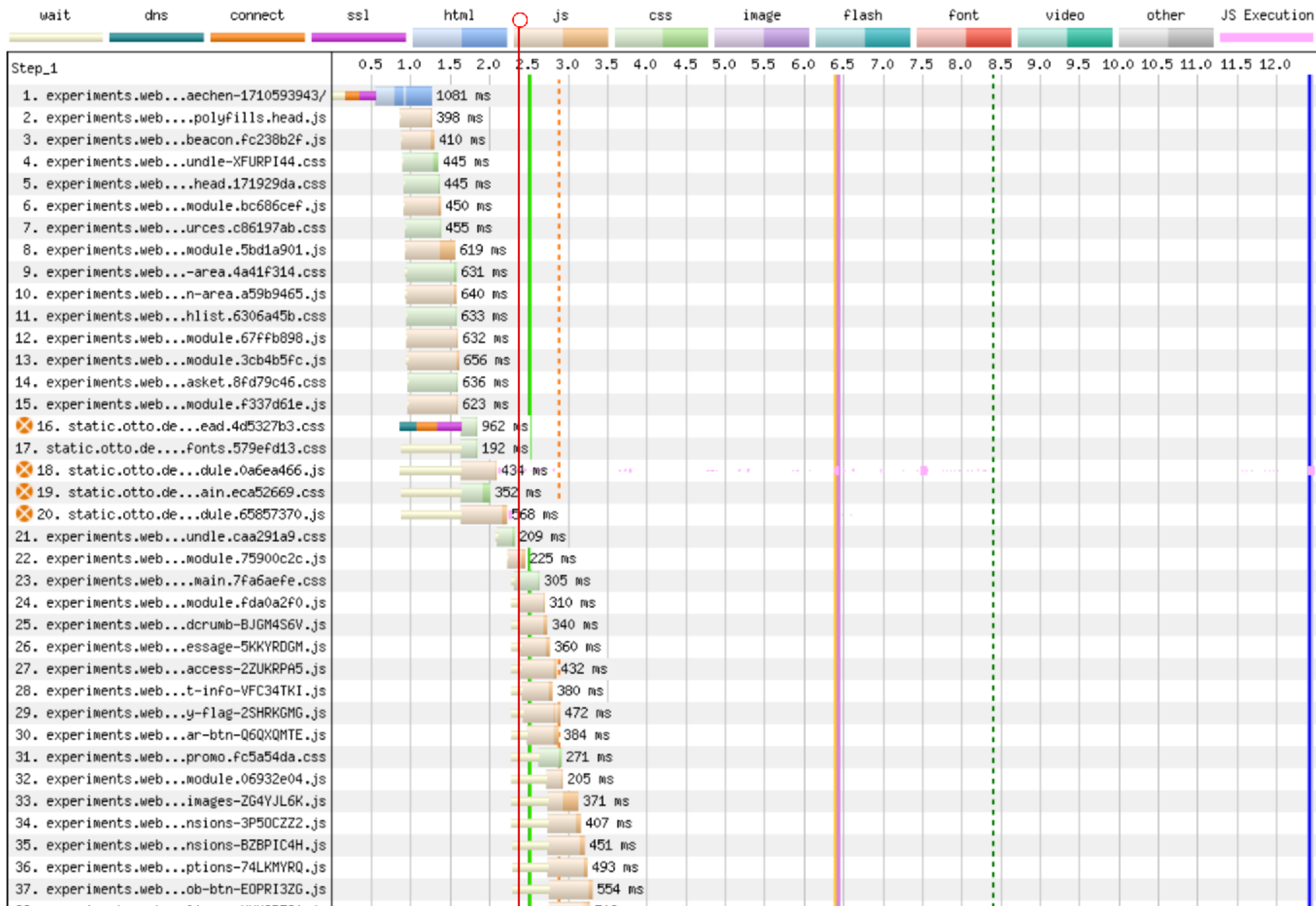


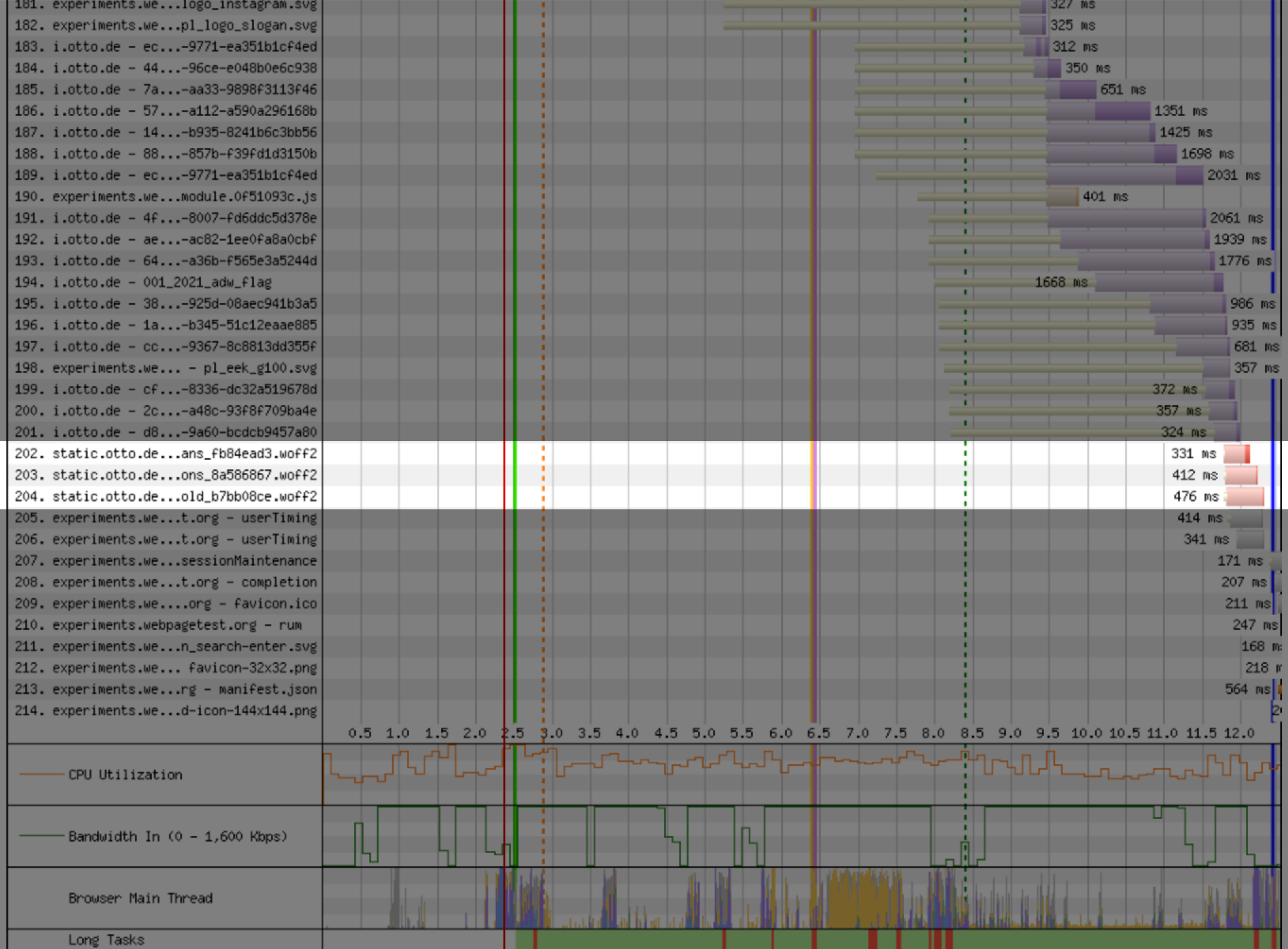
▼ Waterfall Opacity (Adjust the transparency of each run's waterfall)

Experiment



Original (Control Run)






```
<head>
  <!-- Meta foo -->
  <link rel="preload" href="https://cdn-
    static.ecosia.org/.../Inter-Regular.woff2"
    as="font" type="font/woff2"
    crossorigin="true">
  <link rel="preload" href="https://cdn-
    static.ecosia.org/.../Inter-Medium.woff2"
    as="font" type="font/woff2"
    crossorigin="true">
  <link rel="preload" href="https://cdn-
    static.ecosia.org/.../Inter-Bold.woff2"
    as="font" type="font/woff2"
    crossorigin="true">
  <!-- More meta foo, preloads, stylesheets -->
</head>
```

1. Original

```
<head>
<!-- Meta foo -->
<link rel="preload" href="https://cdn-
static.ecosia.org/.../Inter-Regular.woff2"
as="font" type="font/woff2"
crossorigin="true">
<link rel="preload" href="https://cdn-
static.ecosia.org/.../Inter-Medium.woff2"
as="font" type="font/woff2"
crossorigin="true">
<link rel="preload" href="https://cdn-
static.ecosia.org/.../Inter-Bold.woff2"
as="font" type="font/woff2"
crossorigin="true">
<!-- More meta foo, preloads, stylesheets -->
</head>
```

2. Add font-display: swap

```
<script>
  document.fonts.forEach(font => {
    font.display = "swap";
  });
</script>
```

3. Preload headline font too

```
<head>
<!-- Meta foo -->
<link rel="preload" href="https://cdn-static.ecosia.org/.../
condensed-semibold.woff2" as="font" type="font/
woff2" crossorigin="true">
<link rel="preload" href="https://cdn-static.ecosia.org/.../
Inter-Regular.woff2" as="font" type="font/woff2"
crossorigin="true">
<link rel="preload" href="https://cdn-static.ecosia.org/.../
Inter-Medium.woff2" as="font" type="font/woff2"
crossorigin="true">
<link rel="preload" href="https://cdn-static.ecosia.org/.../
Inter-Bold.woff2" as="font" type="font/woff2"
crossorigin="true">
<!-- More meta foo, preloads, stylesheets -->
</head>
```

4. No font preloads, add fallback

```
<head>
<!-- Meta foo -->
<style>
  @font-face {
    font-family: "Founders Grotesk";
    font-weight: 600;
    display: swap;
    src: url(https://cdn-static.ecosia.org/static/fonts/
founders-grotesk/condensed-semibold.woff2)
format("woff2")
  }
  @font-face {
    font-family: 'Adjusted Arial Fallback';
    src: local(Arial);
    size-adjust: 81%;
    ascent-override: 114%;
    descent-override: 29%;
    line-gap-override: normal;
  }
  h1, h3 {
    font-family: "Founders Grotesk", 'Adjusted Arial Fallback'
!important;
  }
</style>
<!-- More meta foo, preloads, stylesheets -->
</head>
```

5. No font preloads

```
<head>
<!-- Meta foo -->
<!-- <link rel="preload" href="https://cdn-
static.ecosia.org/.../Inter-Regular.woff2" as="font"
type="font/woff2" crossorigin />
<link rel="preload" href="https://cdn-
static.ecosia.org/.../Inter-Medium.woff2" as="font"
type="font/woff2" crossorigin />
<link rel="preload" href="https://cdn-
static.ecosia.org/.../Inter-Bold.woff2" as="font"
type="font/woff2" crossorigin /> -->
<!-- More meta foo, preloads, stylesheets -->
</head>
```

1.

Original (Control Run)



0.0

2.

Test_Swap



0.0

3.

Test_Preload_Headline_Font



0.0

4.

Test_Remove_Font_Preloads_Add_Fallback



0.0

5.

Test_Remove_Font_Preloads



0.0

Ecosia - the search engine that... ecosia.org

h1.above-fold-section__heading.heading.heading--h1 349 x 72

Color #FFFFFF

Font 36px "Founders Grotesk", Inter, helvetic...

Margin 0px 0px 24px

ACCESSIBILITY

Contrast 15.32 ✓

Name A better planet with every search

Role heading

Keyboard-focusable

A better planet with every search

Add to Chrome — it's free

Cookies help us plant trees

We use cookies to improve your search experience, keep marketing costs low, and plant more trees without compromising your privacy. Learn more about [Ecosia's use of cookies](#).

Accept all

Reject non-essential

Elements Console Sources **Network** Performance Memory Application Security Lighthouse Recorder

Search Filter

▼ 9eafb6.css cdn-static.ecosia.org/...
 32 ...raw[data-v-132bc54d]{position: absolute; top: 0px; left: 0px; width: 100%; height: 100%;} ...
 36 ...tion[data-v-38803dca],.above-fold-section__heading.heading.heading--h1 {font-size: 36px; font-weight: 600; color: #FFFFFF; text-align: center; margin: 0px 0px 24px 0px;} ...
 38 ...[data-v-432ec69a]{position: absolute; top: 0px; left: 0px; width: 100%; height: 100%;} ...
 40 ...on__header[data-v-dbcc78a] {font-size: 36px; font-weight: 600; color: #FFFFFF; text-align: center; margin: 0px 0px 24px 0px;} ...
 42 ...a-v-1be5f404]{display: flex; justify-content: space-between; align-items: center; padding: 0px 10px;} ...
 43 ...ta-v-02dd03d4]{position: relative; width: 100%; height: 100%;} ...
 44 ...een and (min-width:550px){font-size: 36px; font-weight: 600; color: #FFFFFF; text-align: center; margin: 0px 0px 24px 0px;} ...
 45 ...section[data-v-47132d7a]{font-size: 36px; font-weight: 600; color: #FFFFFF; text-align: center; margin: 0px 0px 24px 0px;} ...
 46 ...ata-v-6fcea574]{position: relative; width: 100%; height: 100%;} ...

▼ d60760d.css cdn-static.ecosia.org/...
 3 ...on:absolute;width:1px;height:1px;position:absolute;top:0px;left:0px;visibility:hidden;white-space:nowrap;word-wrap:normal;}

www.ecosia.org

Inter-Regular.woff2 cdn-static.ecosia.org/static/fonts/inter/static/Inter-Regular.woff2

Inter-Medium.woff2 cdn-static.ecosia.org/static/fonts/inter/static/Inter-Medium.woff2

Inter-Bold.woff2 cdn-static.ecosia.org/static/fonts/inter/static/Inter-Bold.woff2

d60760d.css cdn-static.ecosia.org/static/css/d60760d.css

71b64f6.js cdn-static.ecosia.org/static/js/71b64f6.js

9eafb6.css cdn-static.ecosia.org/static/css/9eafb6.css

43ba920.js cdn-static.ecosia.org/static/js/43ba920.js

b-corp.b19bdb98.svg cdn-static.ecosia.org/static/images/b-corp.b19bdb98.svg

condensed-semibold.woff2 cdn-static.ecosia.org/static/fonts/founders-grotesk/condensed-semibold.woff2

891b73e.js cdn-static.ecosia.org/static/js/891b73e.js

7572d43.js cdn-static.ecosia.org/static/js/7572d43.js

count api.ecosia.org/v1/trees

61d9069.js cdn-static.ecosia.org/static/js/61d9069.js

notifications?language=... api.ecosia.org/notifications?language=en

28 requests | 695 kB transferred

Response

```
font-weight: 600;
src: url(https://cdn-static.ecosia.org/static/fonts/inter/static/Inter-Regular.woff2) format("woff2");
}

@font-face {
font-display: fallback;
font-family: "Inter";
font-weight: 500;
src: url(https://cdn-static.ecosia.org/static/fonts/inter/static/Inter-Medium.woff2) format("woff2");
}

@font-face {
font-display: fallback;
font-family: "Inter";
font-weight: 700;
src: url(https://cdn-static.ecosia.org/static/fonts/inter/static/Inter-Bold.woff2) format("woff2");
}

@font-face {
font-display: fallback;
font-family: "Founders Grotesk";
font-weight: 600;
src: url(https://cdn-static.ecosia.org/static/fonts/founders-grotesk/condensed-semibold.woff2) format("woff2");
}

.fade-enter,.fade-leave-to {
opacity: 0
}

:root {
--color-above-fold-background: #f0f0eb;
--color-above-fold-background-addon: #f0f0eb;
--color-above-fold-text: #275243;
--color-section-wrapper-background-gray: #f0f0eb;
--color-section-wrapper-background-dark-green: #275243;
--color-section-wrapper-background-light-green: #008009;
--color-section-header-title: #275243;
--color-section-header-subtitle-variant: #f0f0eb;
--color-projects-title: var(--color-text-primary);
--color-projects-description: var(--color-text-primary);
--color-projects-link: #333;
--color-financial-report-total-background: #fff;
--color-financial-report-total-text: #275243;
color: #f0f0eb;
color: #f0f0eb;
}

founders
2 matches
```


Browser tabs: Ecosia - the search engine that...

Address bar: ecosia.org

Page Content:

ECOSIA

Search the web to plant trees...

A better planet with every search

Add to Chrome — it's free

Cookies help us plant trees

We use cookies to improve your search experience, keep marketing costs low, and plant more trees without compromising your privacy. Learn more about Ecosia's use of cookies.

Accept all

Reject non-essential

Network Panel:

Filter: 3rd-party requests

Name	Status	Protocol	Type	Initiator	Size	Time	Priority	Cache-...	Waterfall
Inter-Regular.woff2 cdn-static.ecosia.org/static/fonts/inter/static	200	h2	font	(index) Parser	99.4 kB 98.9 kB	3.33 s 587 ms	High	max-ag...	
Inter-Medium.woff2 cdn-static.ecosia.org/static/fonts/inter/static	200	h2	font	(index) Parser	106 kB 106 kB	3.44 s 604 ms	High	max-ag...	
Inter-Bold.woff2 cdn-static.ecosia.org/static/fonts/inter/static	200	h2	font	(index) Parser	107 kB 106 kB	3.48 s 621 ms	High	max-ag...	
condensed-semibold.woff2 cdn-static.ecosia.org/static/fonts/founder...	200	h2	font	d60760d.css Parser	38.9 kB 38.4 kB	1.69 s 616 ms	Highest	max-ag...	

4 / 28 requests | 352 kB / 695 kB transferred | 349 kB / 1.7 MB resources | Finish: 7.41 s | DOMContentLoaded: 4.38 s | Load: 6.76 s

3rd-party requests



Name	Status	Protocol	Type	Initiator	Size	Time	Priority	Cache-...	Waterfall
Inter-Regular.woff2 cdn-static.ecosia.org/static/fonts/inter/static	200	h2	font	(index) Parser	99.4 kB 98.9 kB	3.33 s 587 ms	High	max-ag...	
Inter-Medium.woff2 cdn-static.ecosia.org/static/fonts/inter/static	200	h2	font	(index) Parser	106 kB 106 kB	3.44 s 604 ms	High	max-ag...	
Inter-Bold.woff2 cdn-static.ecosia.org/static/fonts/inter/static	200	h2	font	(index) Parser	107 kB 106 kB	3.48 s 621 ms	High	max-ag...	
condensed-semibold.woff2 cdn-static.ecosia.org/static/fonts/founder...	200	h2	font	d60760d.css Parser	38.9 kB 38.4 kB	1.69 s 616 ms	Highest	max-ag...	

Inter Bold

This is a **TrueType** font with **2504 characters**. It has **35 layout features**.

Characters 2504	Glyphs 2548	Layout features 35	Languages 51
Filename Inter-Bold.woff2		Size 104 KB	Format WOFF2
Designed by Rasmus Andersson		Manufactured by rsms	
Copyright Copyright © 2020 The Inter Project Authors		Version Version 3.019;git-0a5106e0b	

License
This Font Software is licensed under the SIL Open Font License, Version 1.1. This license is available with a FAQ at: <http://scripts.sil.org/OFL>

Language support
51 languages: Afrikaans, Albanian, Azerbaijani, Basque, Belarusian, Bosnian, Bulgarian, Catalan, Croatian, Czech, Danish, Dutch, English, Estonian, Faroese, Filipino, Finnish, French, Galician, German, Greek, Hungarian, Icelandic, Indonesian, Irish, Italian, Kazakh, Kyrgyz, Latvian, Lithuanian, Macedonian, Malay, Mongolian, Norwegian Bokmål, Polish, Portuguese, Romanian, Russian, Serbian, Slovak, Slovenian, Spanish, Swahili, Swedish, Tongan, Turkish, Ukrainian, Uzbek, Vietnamese, Welsh, Zulu

Wakamai Fondue might fail to detect some languages. I'm working on a better system—stay tuned!

- Layout features**
- aalt
 - calt
 - case
 - ccmp
 - cv01
 - cv02
 - cv03
 - cv04
 - cv05
 - cv06
 - cv07
 - cv08
 - cv09
 - cv10
 - cv11
 - dlig
 - dnom
 - frac
 - locl
 - numr
 - salt
 - sinf
 - ss01
 - ss02
 - ss03
 - ss04
 - subs
 - supr
 - tnum
 - zero
 - csp
 - kern
 - mark

Hi! Try the new Wakamai Fondue beta!

h1.above-
ading.he
Color
Font 36p
Margin
ACCESSIBI
Contrast
Name
Role
Keyboard-

Search t

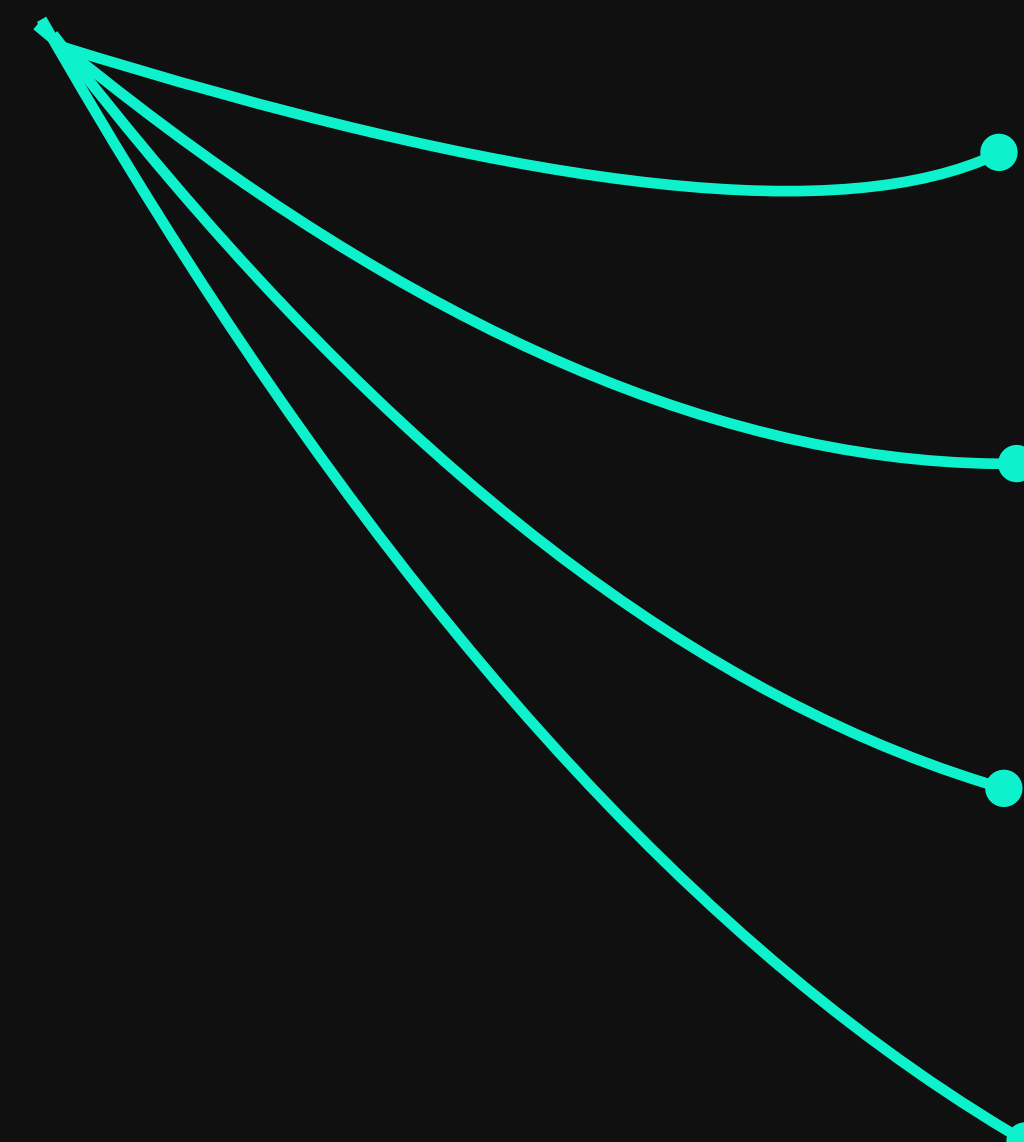
A bet

We use co
keep mark
without co
about Ecos

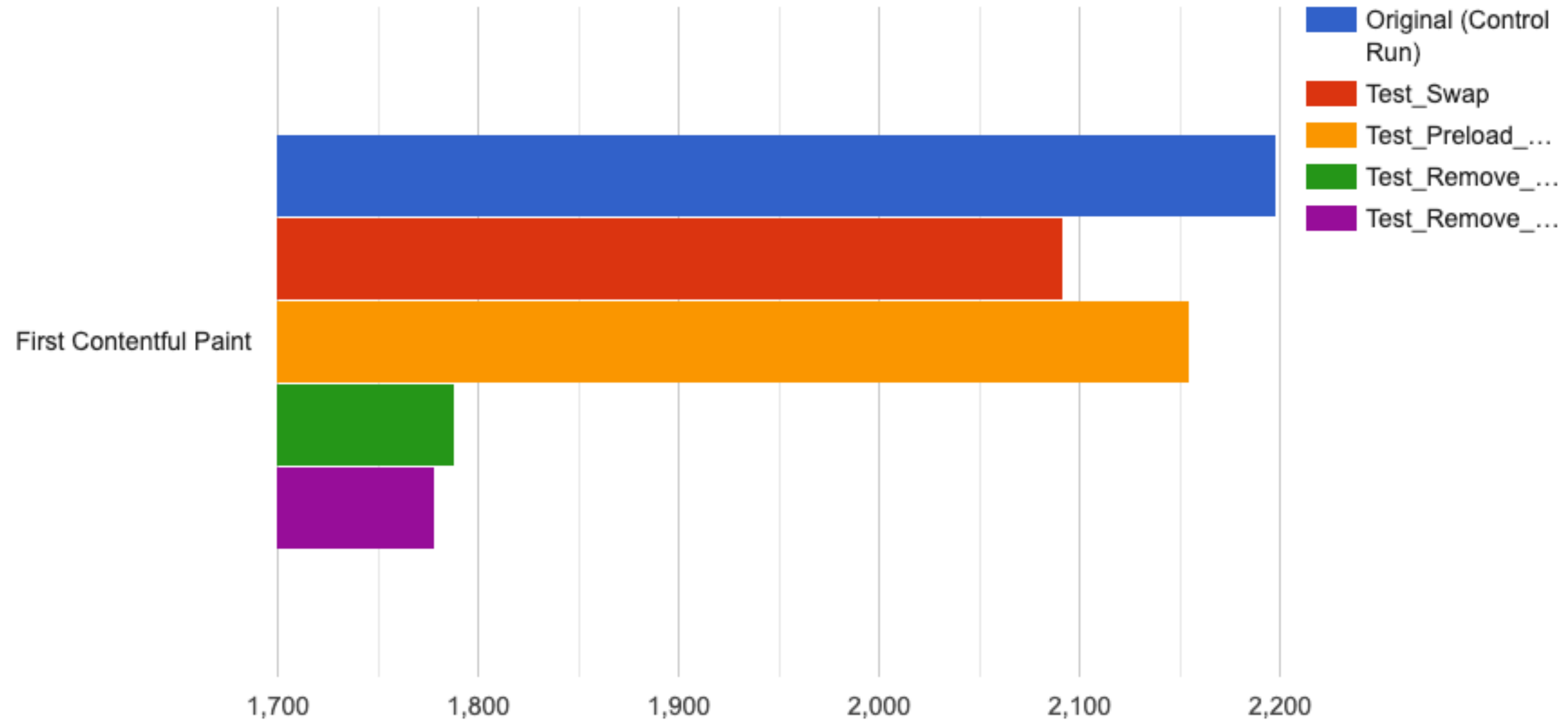
We use coc
keep marke
without cor
about Ecos

**If you're gonna preload,
preload with care.**

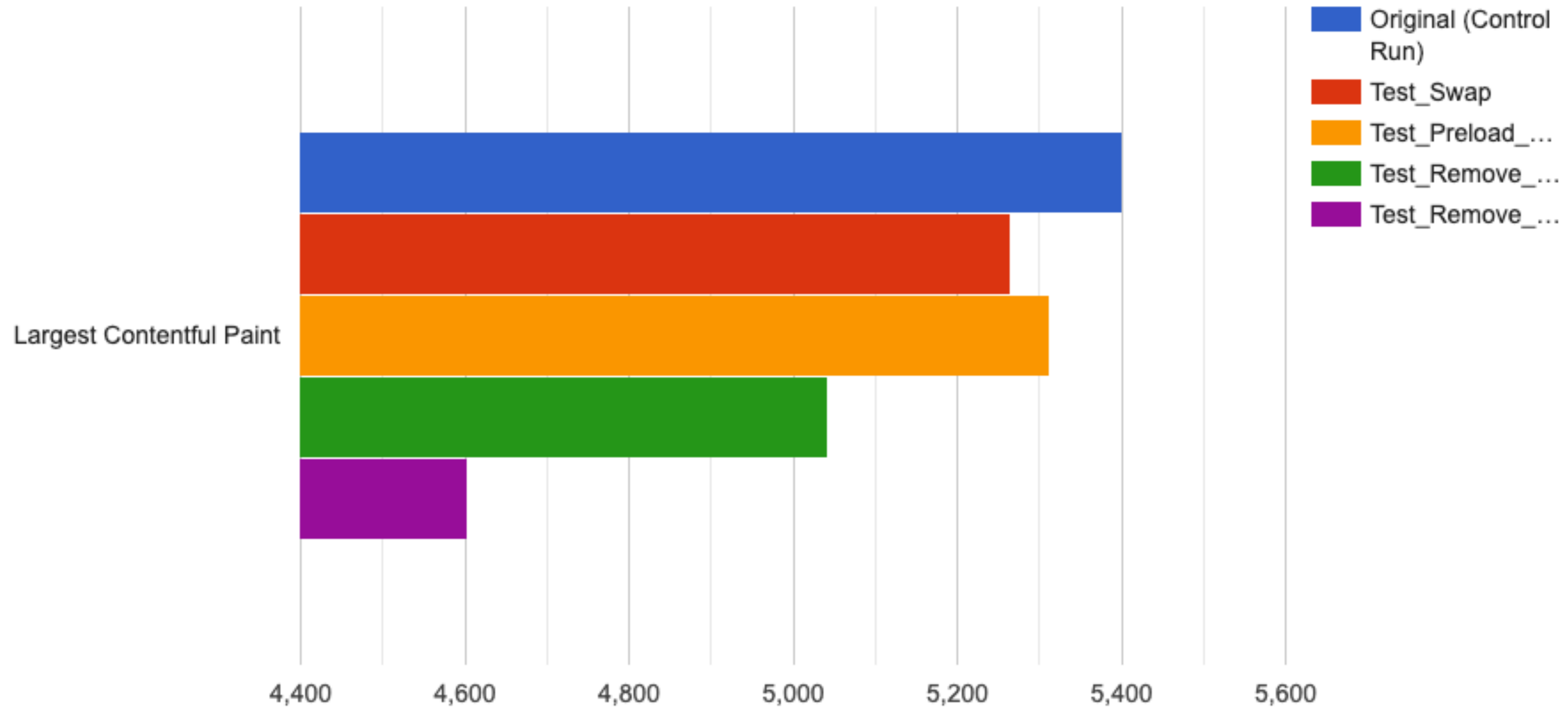
If you're gonna preload, preload with care.

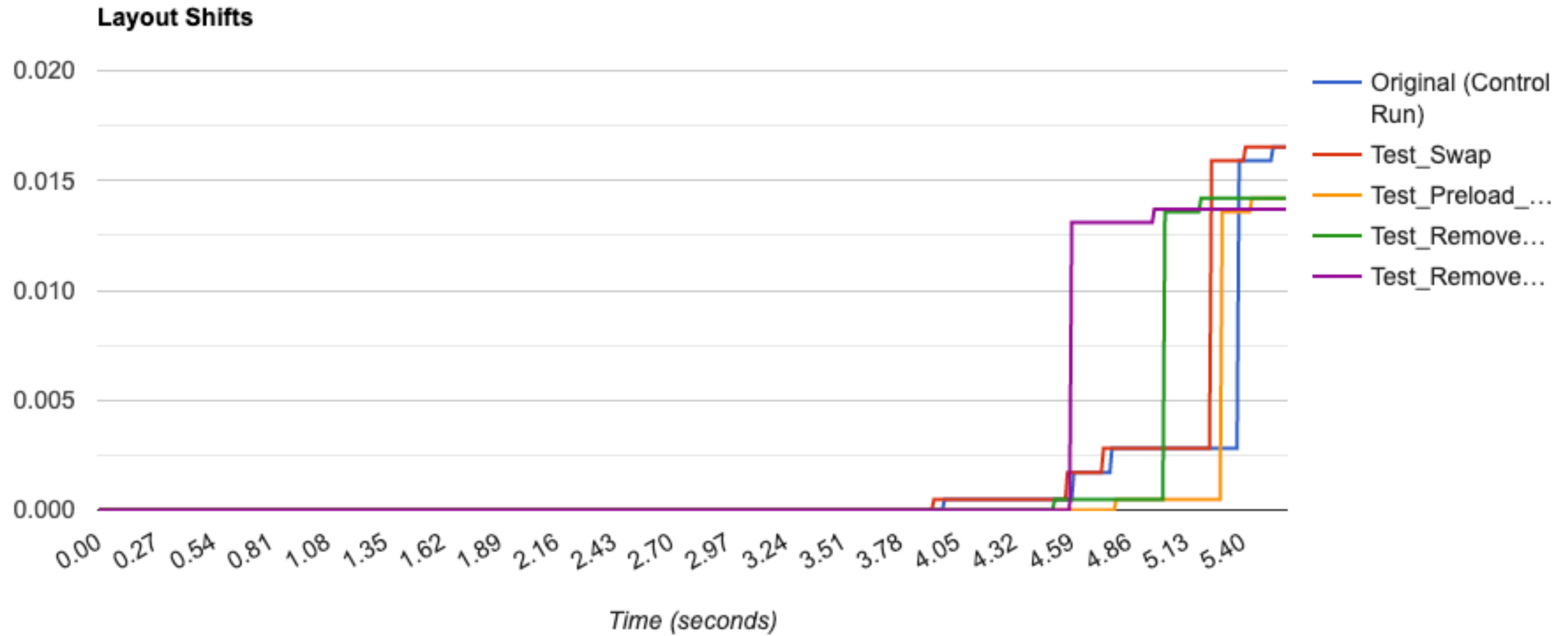
- 
- Sub-setting
 - The right paths
 - Page type
 - Traffic and network conditions

First Contentful Paint (ms)



Largest Contentful Paint (ms)



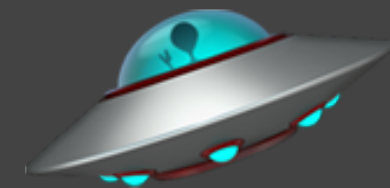


**If you're gonna use brand fonts,
have a good fallback.**

Wrap-up

1. Check how fallbacks match up with brand/web fonts on your sites
2. Ask yourself:
Do I really need a web font?
3. Use system fonts as fallbacks for brand/web fonts
4. Tweak font-face descriptors and inline the styles (Chromium only) for better font matching
5. Look at analytics / RUM and ask:
Do I really need font preloads?
6. If preloading fonts: only preload what you need (sub-set, font faces)

Pro Tip: Make sure you have a stunt double ready for when **they** come!





Thanks!
Thanks!
THANKS!
Thanks!