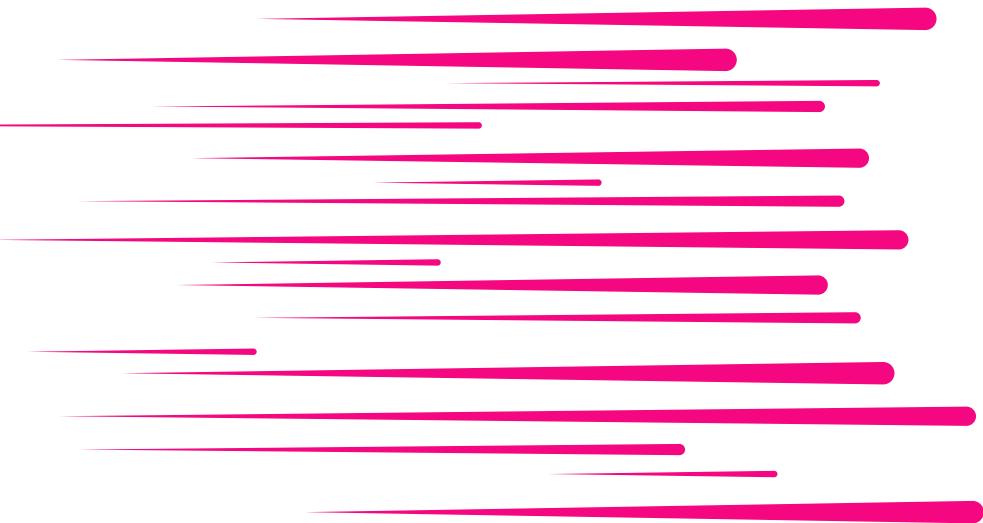


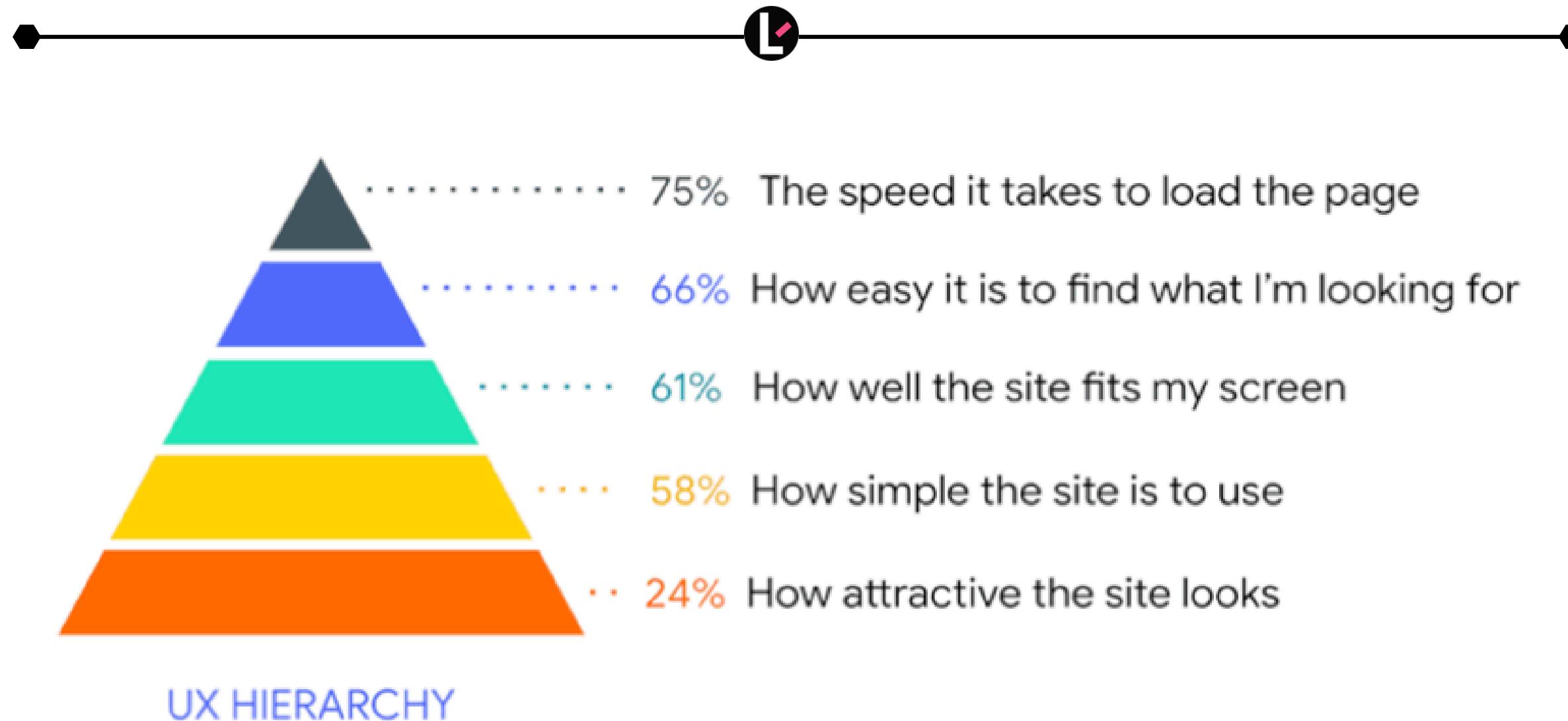
Larroude

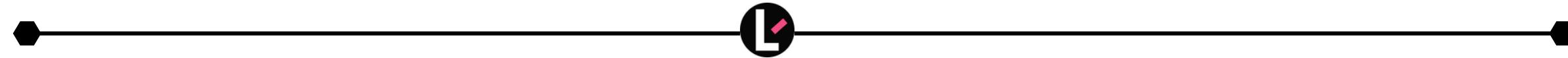


Basic Concepts Of Web Performance

- The internet is becoming heavier, with the average mobile page now around 1.5 MB, mainly due to Js and images. This growth, combined with network latency, CPU limits, render-blocking patterns, and unnecessary third-party code, creates performance challenges. Users prioritize speed in UX, because a page needs to load fully to be usable or appreciated.

This is a UX hierarchy pyramid

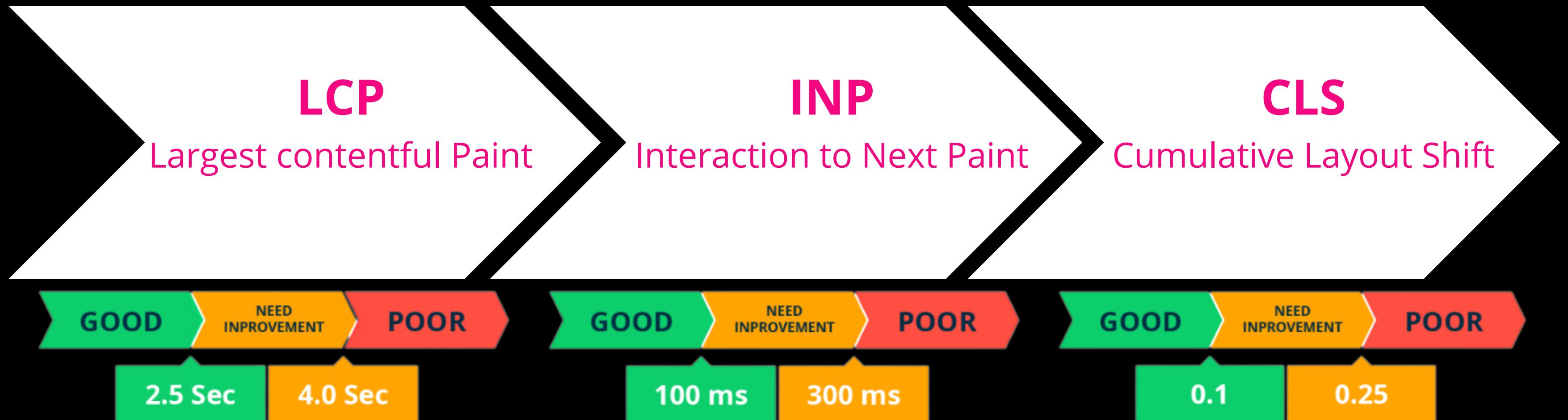




- With the advancement of technology, it is possible to measure site performance using tools such as Lighthouse (developed by Google), which provides a detailed report on what is harming the site's performance through DevTools.

- Web metrics is a Google initiative to provide unified guidance on essential indicators for delivering a great user experience on the web. To simplify performance measurement, Google introduced Core Web Vitals, which are a subset of metrics applicable to all web pages and should be measured by all

Core Web Vitals



Loading

Interactivity

Visual Stability

Largest Contentful Paint (LCP)

- Measures loading performance.
Goal: Up to 2.5 seconds after the page starts loading.

Interaction to Next Paint (INP)

- Measures time of interactivity. (For example: after you click a button, how much time for action to occur)
- Goal: Up to 200 milliseconds.

Cumulative Layout Shift (CLS)

- Measures visual stability. (For example: An ad appears at the top of the page, moving the text and making you lose your reading position)
- Goal: Up to 0.1





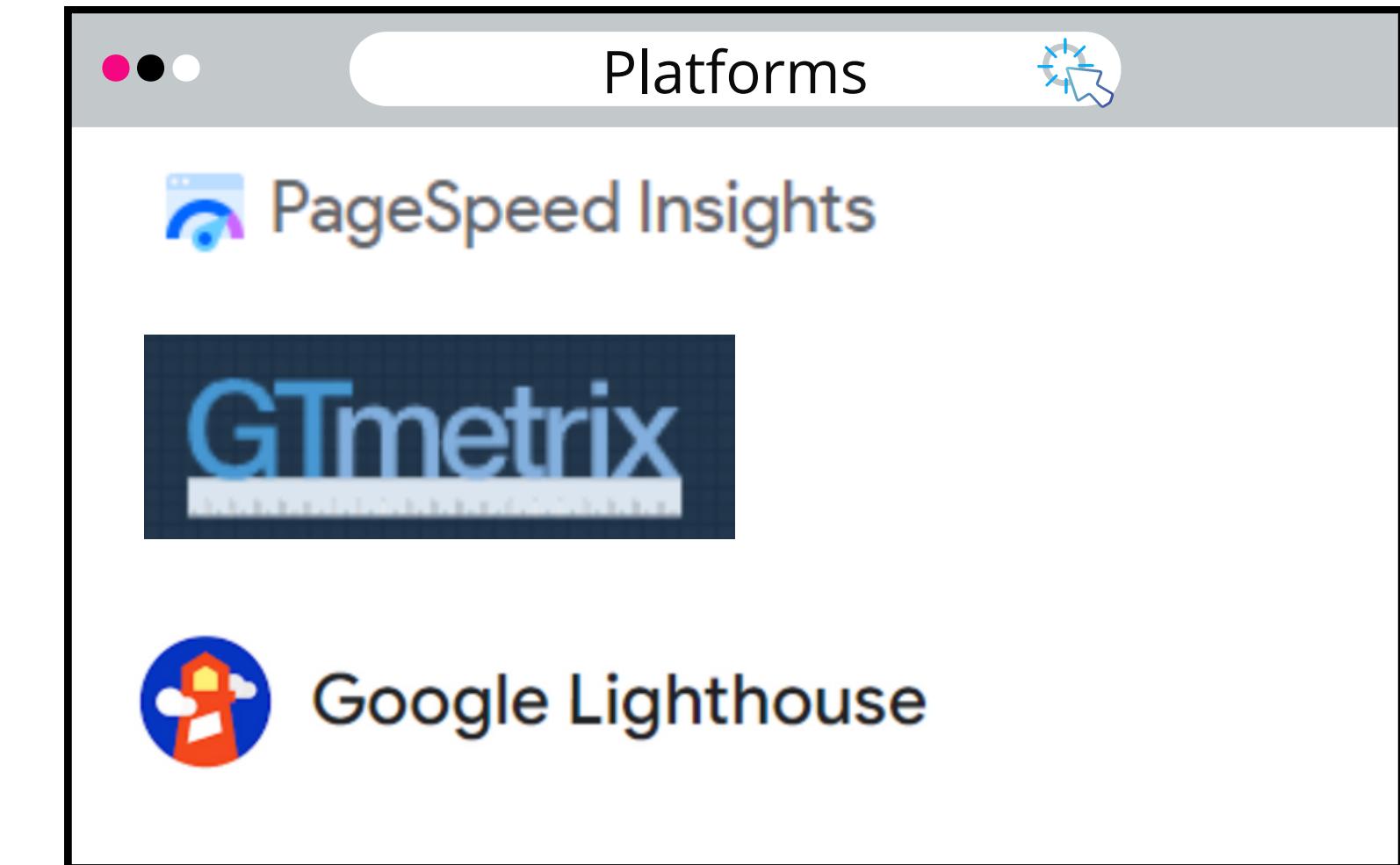
Comparisons



I made comparisons between our Shopify platform, GTmetrix, Lighthouse and PageSpeed



In the next slides, I will include some screenshots of reports I obtained from each of the platforms.



GTmetrix & PageSpeed



GTmetrix Grade

E	Performance 48%	Structure 76%
	Largest Contentful Paint 2.5s	Total Blocking Time 907ms
	Cumulative Layout Shift 0	

Web Vitals

Summary **Performance** **Structure** **Waterfall** **Video** **History** **Alerts**

Speed Visualization

0.8s 1.7s 2.5s 3.3s 4.2s 5s 5.8s 6.6s

TTFB: 92ms
Redirect: One
Connect: 30ms
Backend: 60ms

First Contentful Paint: 358ms

Largest Contentful Paint: 2.5s
Onload Time: 5.3s
Time to Interactive: 5.9s
Fully Loaded Time: 6.6s

Top Issues

These audits are identified as the top issues impacting your performance.

Severity	Audit	Description
High	Avoid enormous network payloads (LCP)	Total size was 4.79MB
Med-High	Avoid an excessive DOM size (TBT)	2,888 elements
Med	Avoid long main-thread tasks (TBT)	20 long tasks found
Med	Use explicit width and height on Image elements (CLS)	2 images found
Med	Serve static assets with an efficient cache policy	Potential savings of 602KB

Improving these audits seen here can help as a starting point for overall performance gains.
[See all Structure audits](#)

Page Details

Pages with smaller total sizes and fewer requests tend to load faster.

Fully Loaded Time: 6.6s

Total Page Size - 5.75MB

2.62MB	Video 1.00MB	Other 929KB	IMG 609KB	Font 501KB
--------	--------------	-------------	-----------	------------

Total Page Requests - 284

JS 38.4%	Other 33.5%	IMG 16.2%	Font 10.1%
----------	-------------	-----------	------------

Look into reducing JavaScript, reducing web-fonts, and image optimization to ensure a lightweight and streamlined website.

Entender a experiência dos seus usuários

Avaliação das Core Web Vitals: reprovado

Largest Contentful Paint (LCP) 3,1s	Interaction to Next Paint (INP) 112ms	Cumulative Layout Shift (CLS) 0
-------------------------------------	---------------------------------------	---------------------------------

OUTRAS MÉTRICAS IMPORTANTES

First Contentful Paint (FCP) 1,9s	First Input Delay (FID) 7ms	Time to First Byte (TTFB) 0,5s
-----------------------------------	-----------------------------	--------------------------------

Periodo de coleta dos últimos 28 dias Várias computadoras Várias conexões de rede Todas as vendas do Chrome

Diagnosticar problemas de desempenho

Desempenho 48 Accessibilidade 100 Práticas recomendadas 56 SEO 100

Desempenho 40

O valor é estimado e pode variar. O índice de desempenho é calculado diretamente por essas métricas. Ver calculadora.

MÉTRICAS

First Contentful Paint 0,7 s	Largest Contentful Paint 3,8 s
Total Blocking Time 1.450 ms	Cumulative Layout Shift 0
Speed Index 8,8 s	

Captured at 18 de jul. de 2024, 17:03 UTC Área de trabalho emulada with Lighthouse 12.0.0 Campanha inicial de página Limite personalizada Usando Headless Chromium 125.0.6422.175 with

Shopify & Lighthouse



Web Performance

Loading Speed

Largest Contentful Paint: 2.85 s (Moderate)

The main content loads within 2.85 seconds for 75% of your visits, indicating room for improvement.

Interactive

Interaction to Next Paint: 112 ms (Good)

The response to user interactions occur in less than 112 milliseconds for 75% of your visits, indicating optimal performance.

Visual Stability

Cumulative Layout Shift: 0.003 (Good)

The layout shifts are less than 0.003 for 75% of your visits, indicating optimal performance.

All devices

Best practices for improving performance

- Uninstall unused apps
- Limit your use of tracking pixels
- Serve the best image to every device
- Keep your themes updated

Helpful resources

- Discover how Core Web Vitals impact your SEO rankings.
- Learn more about Core Web Vitals on the Shopify performance blog.
- For more specific recommendations, run a simulated test.
- Get experts to help, consult with Shopify's Performance team.

Desempenho: 26 | Acessibilidade: 86 | Práticas recomendadas: 56 | SEO: 92

Alguns problemas afetaram esta execução do Lighthouse:

- Pode haver dados armazenados afetando o desempenho de carregamento neste local: IndexedDB. Examine esta página em uma janela anônima para evitar que esses recursos afetem suas pontuações.
- Carregamento da página lento demais para ser concluído dentro do limite de tempo. Os resultados podem estar incompletos.

Desempenho

Os valores são estimados e podem variar. O índice de desempenho é calculado diretamente por essas métricas. [Ver calculadora](#).

MÉTRICAS

Métrica	Valor
First Contentful Paint	0,9 s
Largest Contentful Paint	3,3 s
Total Blocking Time	520 ms
Cumulative Layout Shift	0,7
Speed Index	5,2 s

Abrir visualização

[Ver Treemap](#)





Loaded Resources Analysis and optimization: Animations, Images, and Styling

Lazy Loading Implementation

```
image_tag: loading: 'lazy', sizes: sizes, widths: widths, class: 'constrained-image', style: style -)}
```

•••

What is Lazy Loading? 

Lazy loading is a technique that loads resources such as images and videos only when they are needed, improving initial load time and page efficiency.



•••

files using lazy loading 

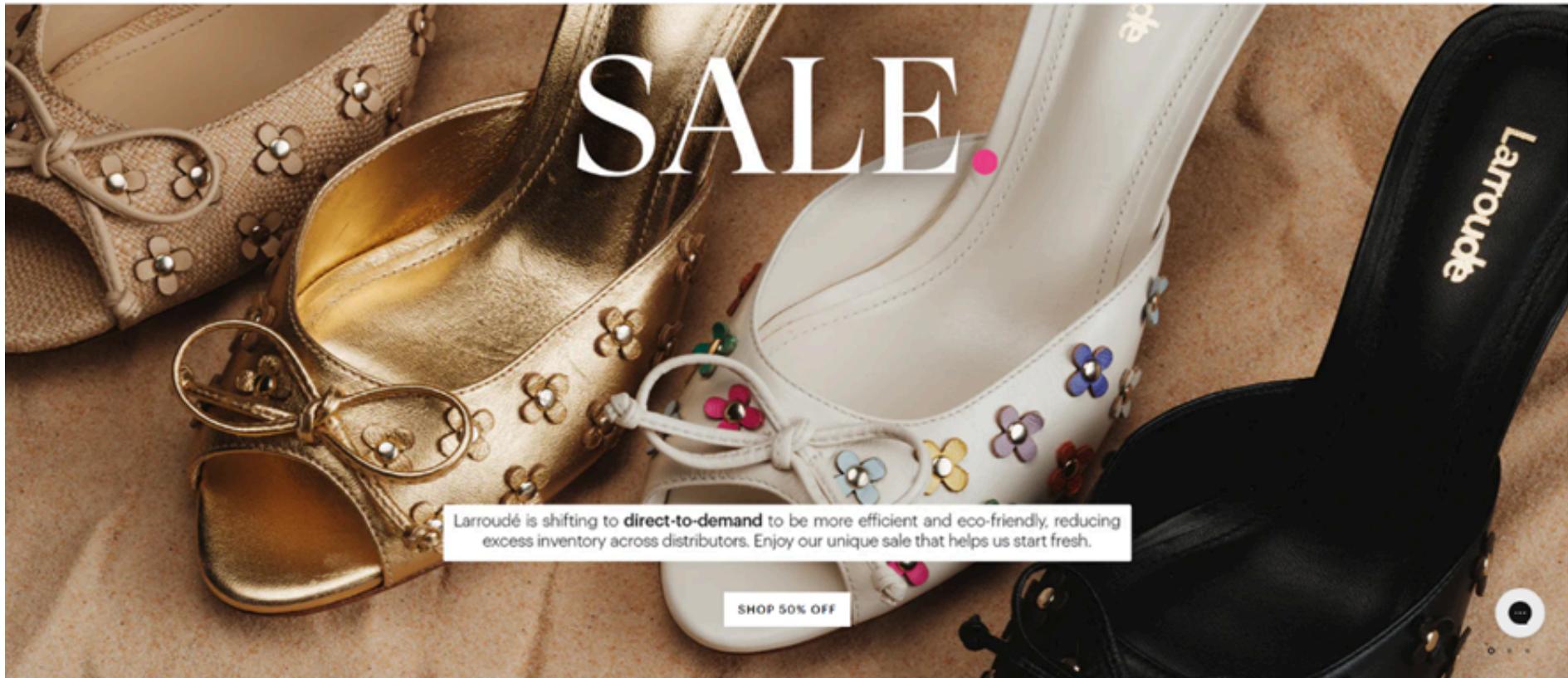
Lazy loading was identified in several files, such as:

- main-product.liquid
- faq.liquid
- images-with-text-scroll.liquid
- main-gift-card.liquid
- main-list-collect
- In the slideshow of the banners

<CODE/>

DONE 

Animations



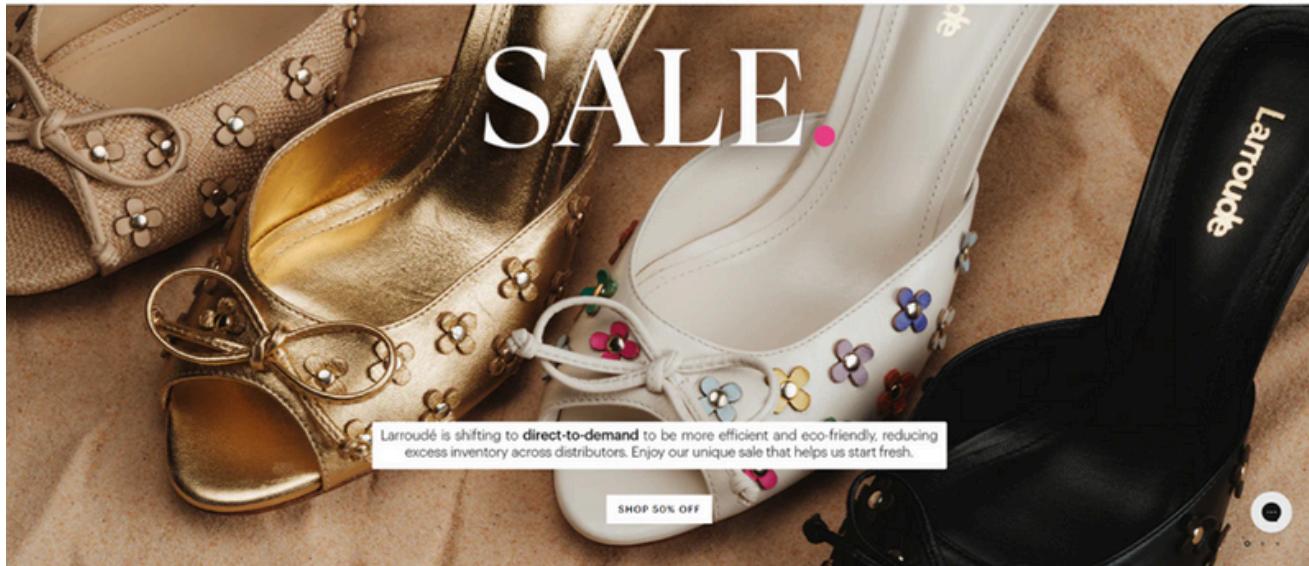
Brazil is experiencing its worst floods in 80 years, with dozens of lives lost and many people still missing.



*Keyframes in CSS define specific changes in object movement or appearance, creating visual effects over time.

```
@keyframes animateIconBlock {  
  0% {  
    opacity: 1;  
    transform: translateY(0%);  
  }  
  
  50% {  
    opacity: 0;  
    transform: translateY(100%);  
  }  
  
  51% {  
    opacity: 0;  
    transform: translateY(-100%);  
  }  
}
```

Delete animations



Brazil is experiencing its worst floods in 80 years, with dozens of lives lost and many people still missing.

How to Help

READ MORE



Starting **next week**, animations without purpose, such as fade-in, zoom-in, animations on arrows, and close buttons, will be deleted.

DONE ✓





Analysis of GTmetrix Reports

Live theme & Page Development - May



Compare Reports

+ Add Another URL

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https://larroude.com/?_ab=08_id=04_sc=1

Thu, Jul 25, 2024 7:29 PM -0700

Vancouver, Canada

Chrome 117.0.0.0

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https://pricedrbwc1dpzqo-4259805254.shadyreview.com/

Thu, Jul 25, 2024 7:34 PM -0700

Vancouver, Canada

Chrome 117.0.0.0

GTmetrix Grade	D (60%)	D (64%)
Performance Score	50%	60% -10%
Structure Score	76%	71% -5%
Largest Contentful Paint	2.5s	1.3s -11s
Total Blocking Time	796ms	750ms -46ms
Cumulative Layout Shift	0	0.02 -0.02
Total Page Size	6.02MB	5.29MB -754KB
Total # of Requests	300	260 -40

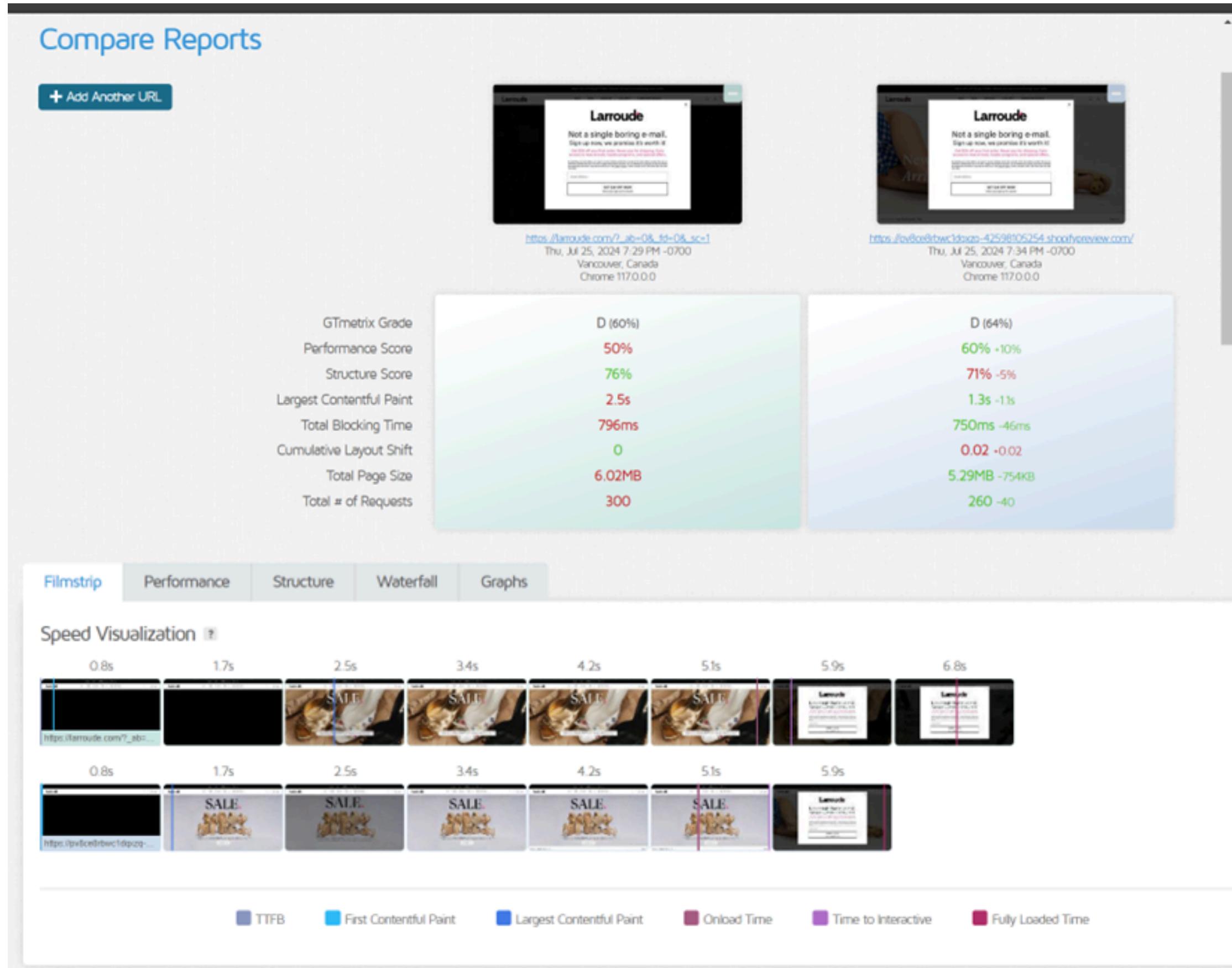
Filmstrip Performance Structure Waterfall Graphs

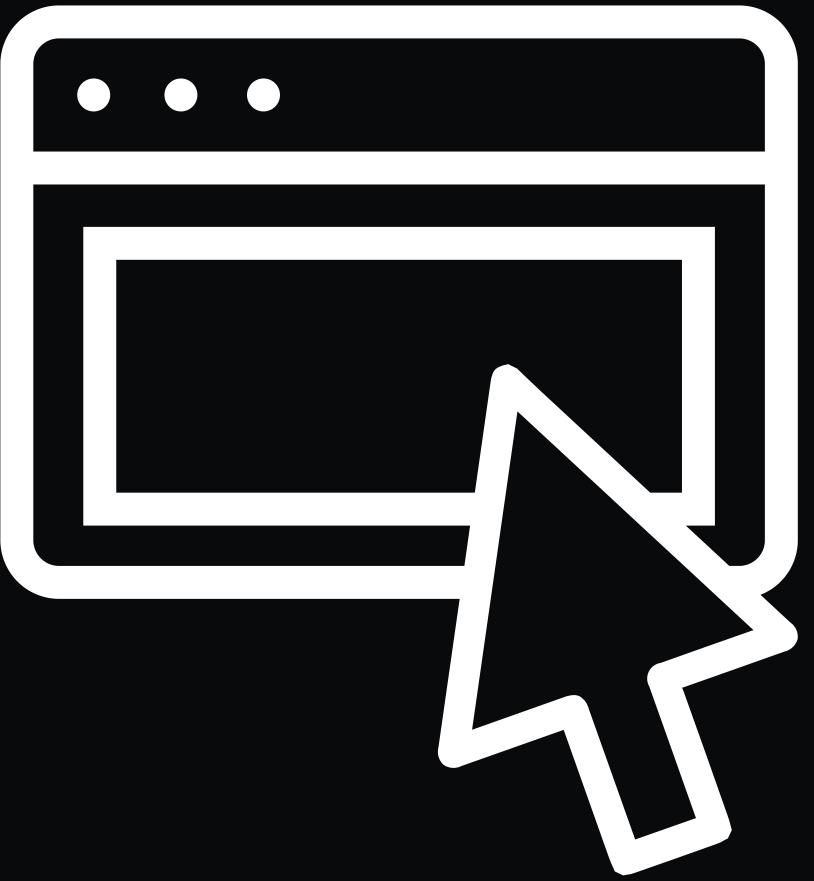
Speed Visualization

0.8s 1.7s 2.5s 3.4s 4.2s 5.1s 5.9s 6.8s

0.8s 1.7s 2.5s 3.4s 4.2s 5.1s 5.9s

■ TTFB ■ First Contentful Paint ■ Largest Contentful Paint ■ Onload Time ■ Time to Interactive ■ Fully Loaded Time





Analysis of most used pages

10 most accessed pages



Milan Espadrille In Gold Metallic Leather

Based on our enduring bestseller, we've reimagined our Milan sandal as an espadrille for Summer fun....

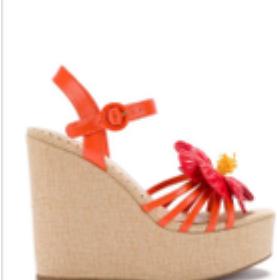
L Larroude / \$350



Dolly Broderie Sandal In Natural Raffia

Equal parts party and chic, this leg-lengthening platform is ready for anything. With a comfortable...

L Larroude / \$330



Magnolia Wedge In Orange Leather

Another important addition to our Spring lineup, this new wedge features all of our favorite things. Equal parts sweet and sexy with a chic combo of leather...

L Larroude / \$350



High_Summer_24

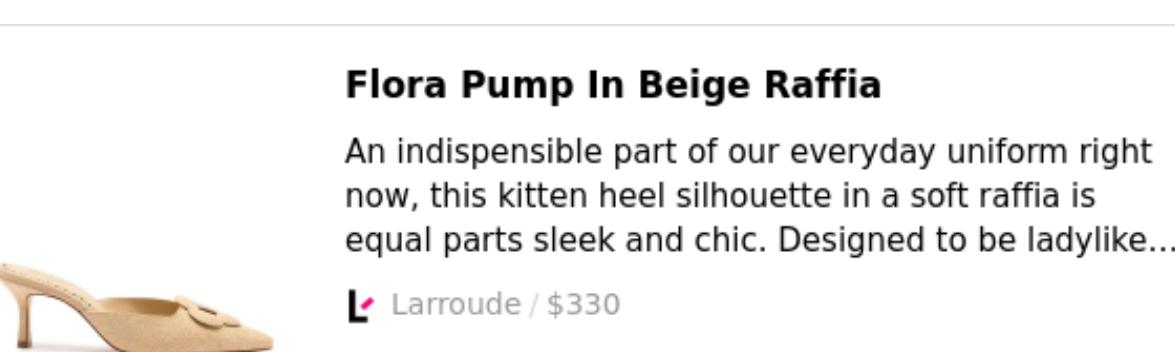
L Larroude



Markarian

L Larroude

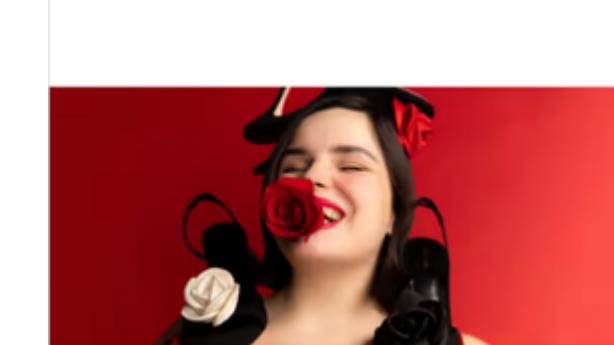
Content is no longer available



Flora Pump In Beige Raffia

An indispensable part of our everyday uniform right now, this kitten heel silhouette in a soft raffia is equal parts sleek and chic. Designed to be ladylike...

L Larroude / \$330



ALL SHOES



SANDALS

Sandals

Shop premium Larroudé flat, platform, and high heel sandals. Free shipping and returns for all orders.

L Larroude



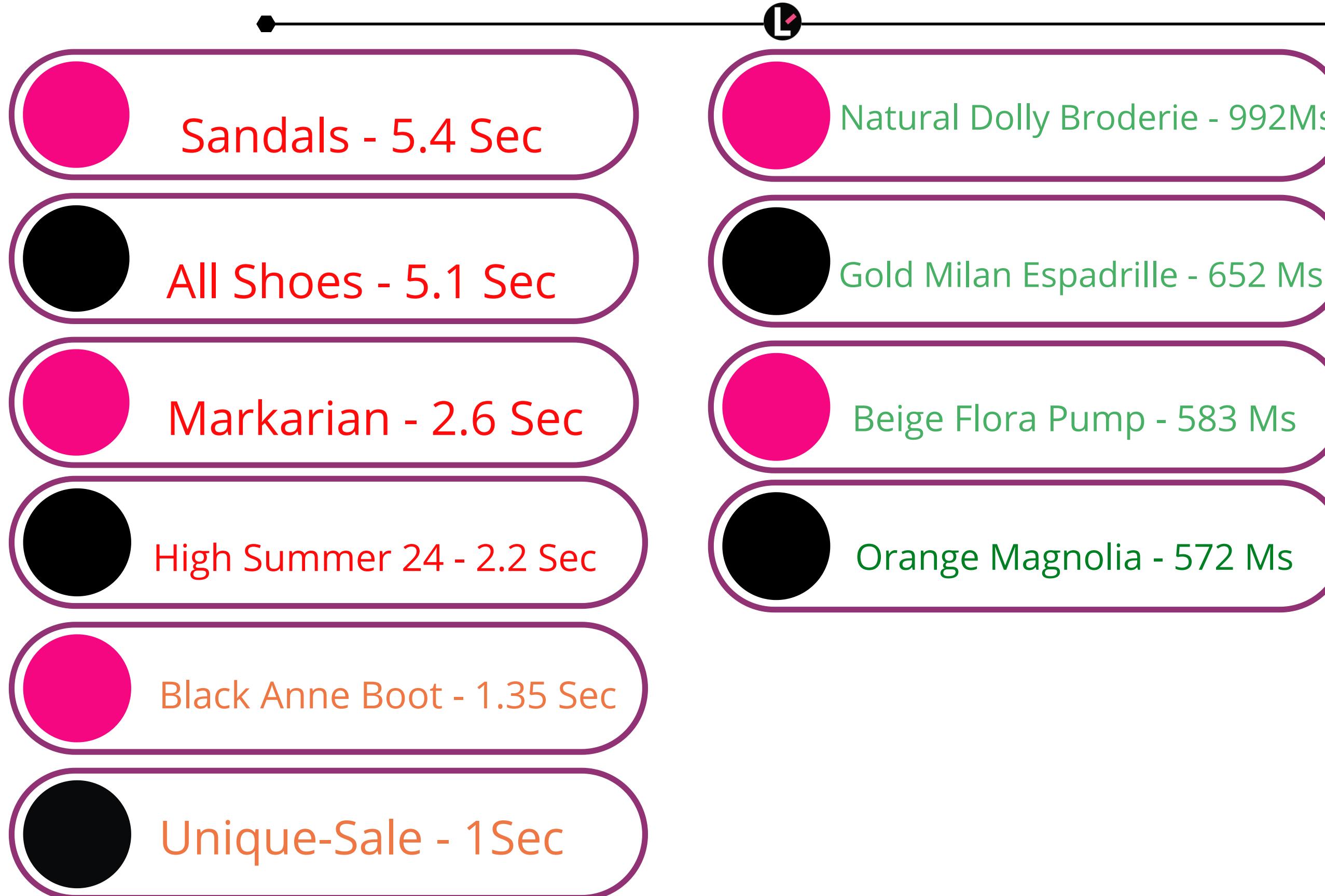
Anne Boot In Black Leather

When it comes to the classic riding boot, we love an authentic look and feel, and the Anne is the real deal. Named for Princess Anne and the flat...

L Larroude / \$485



Top 10 Pages with Longest Load Times (Slowest to Fastest)



Key for analysis letters



Letters



A (90-100%): Excellence. The page is very well optimized and offers a fast and efficient user experience.

B (80-89%): Good. The page is well optimized, but there may still be some areas for improvement.

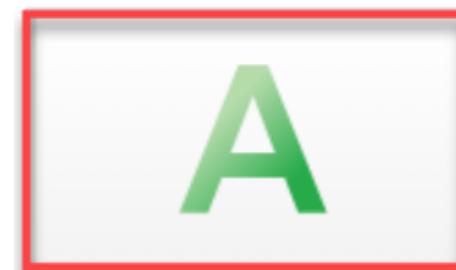
C (70-79%): Average. The page has acceptable performance, but there are several areas that could be optimized to improve the user experience.

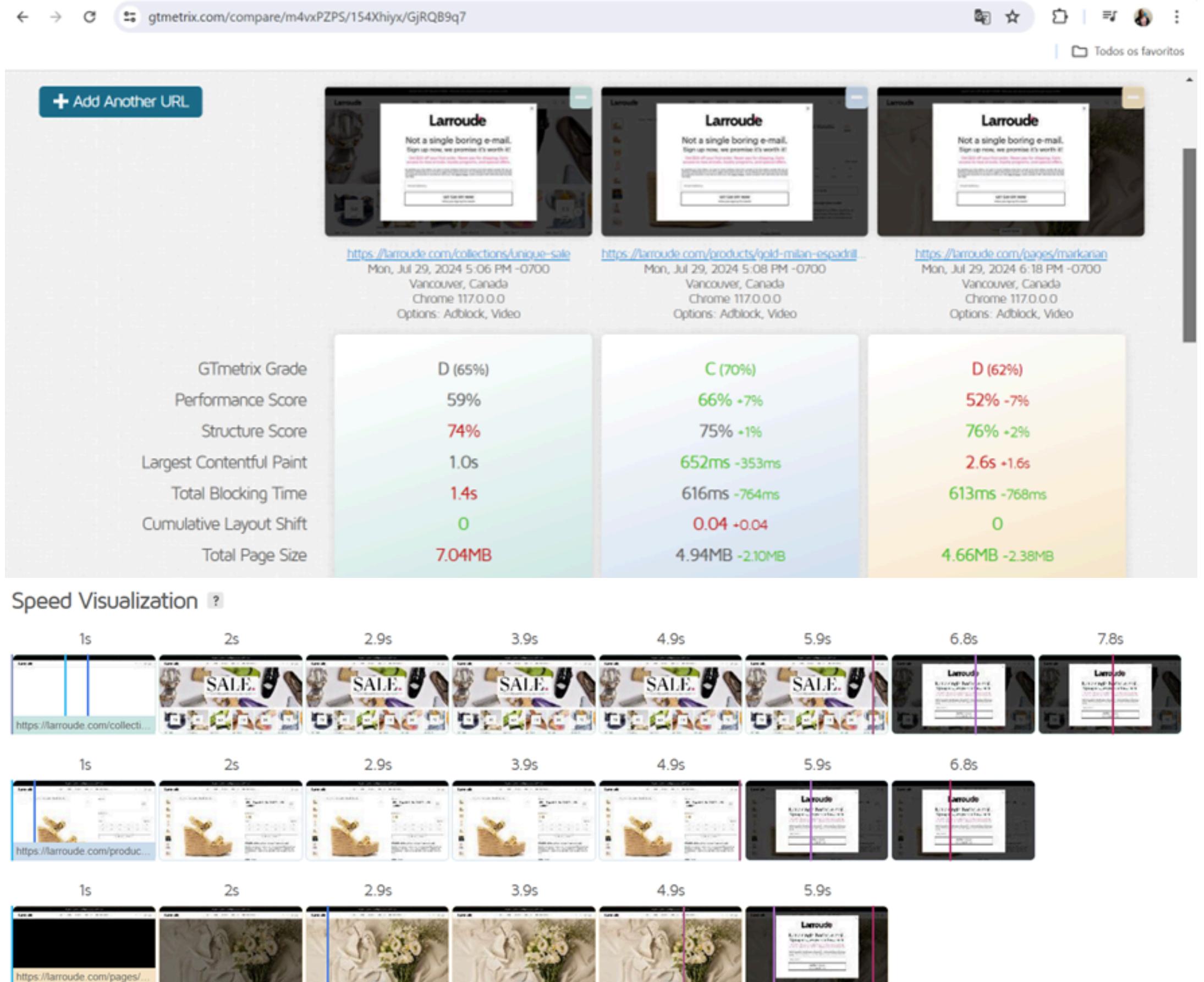
D (60-69%): Below average. The page has several performance issues that need to be addressed to improve the user experience.

E (50-59%): Poor. The page has serious performance issues that negatively impact the user experience.

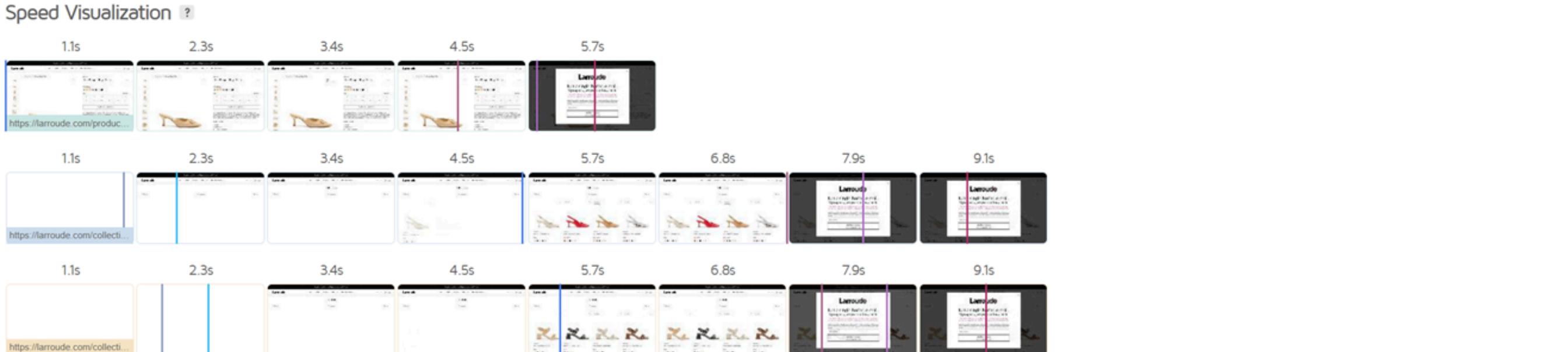
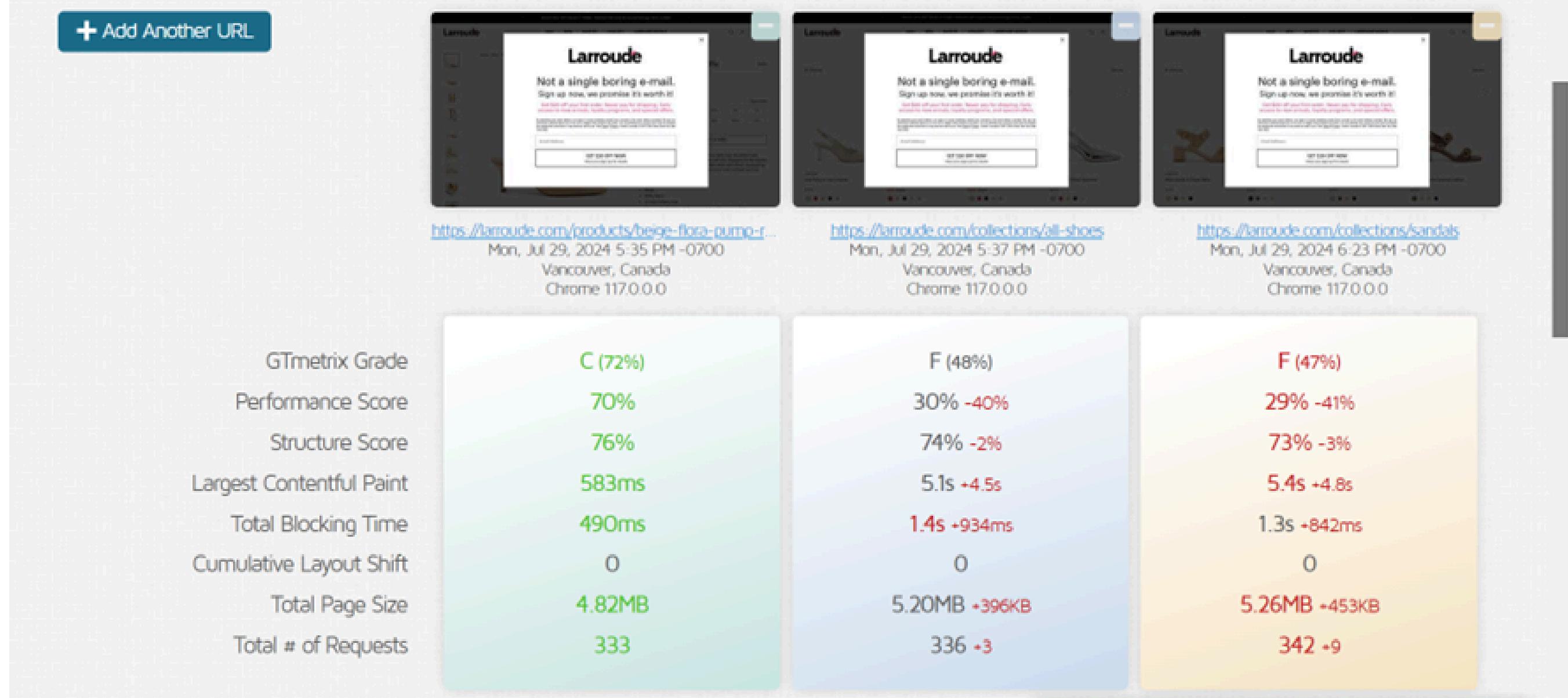
F (0-49%): Very poor. The page is very poorly optimized and offers a poor user experience, requiring significant improvements.

GTmetrix Grade ?



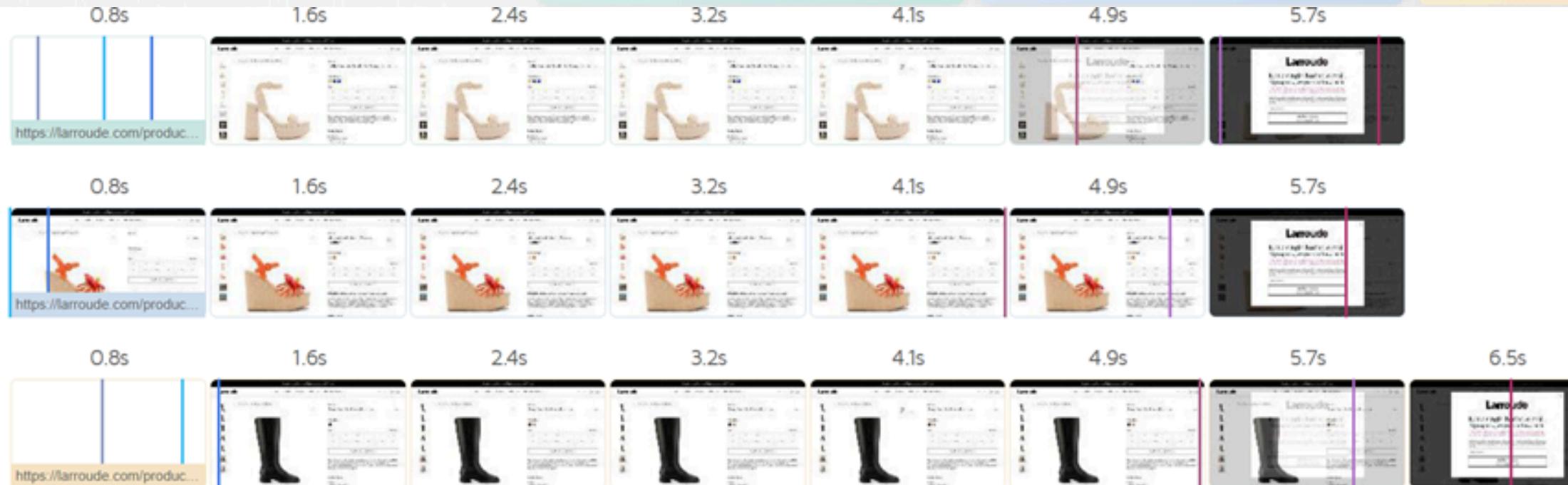
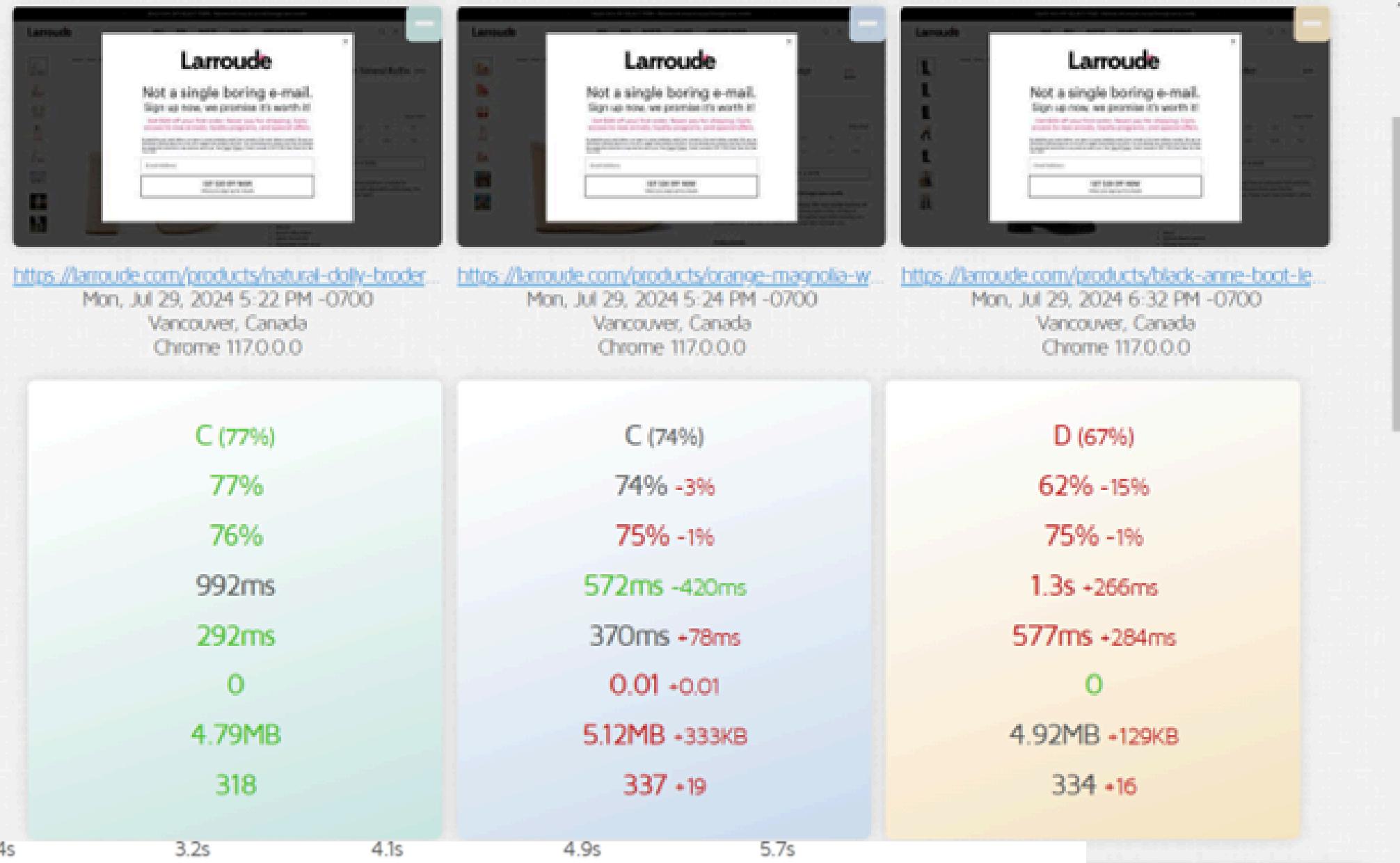


<https://gtmetrix.com/compare/m4vxPZPS/154Xhiyx/GjRQB9q7>



<https://gtmetrix.com/compare/eLmnjnEv/KY3QfyvM/kKWXFI4Q>

+ Add Another URL



<https://gtmetrix.com/compare/YvoPmghB/AkY0cGOJ/UcrLDkFd>

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Latest Performance Report for:

https://larroude.com/pages/high_summer_24

Report generated: Mon, Jul 29, 2024 6:35 PM -0700
Test Server Location: 🇨🇦 Vancouver, Canada
Using: 🌐 Chrome 117.0.0.0, Lighthouse 11.0.0

GTmetrix Grade

D

Performance 52%	Structure 74%	Largest Contentful Paint 2.2s	Total Blocking Time 871ms	Cumulative Layout Shift 0
-----------------	---------------	-------------------------------	---------------------------	---------------------------

Summary Performance Structure Waterfall Video History Alerts

Speed Visualization

Timeline points: 0.8s, 1.6s, 2.4s, 3.3s, 4.1s, 4.9s, 5.7s, 6.5s

Annotations:

- 0.8s: TTRB: 110ms
- 1.6s: Redirect: 0ms, Connect: 25ms, Backend: 85ms
- 2.4s: First Contentful Paint: 386ms
- 2.4s: Largest Contentful Paint: 2.2s
- 4.9s: Onload Time: 5.3s
- 5.7s: Time to Interactive: 6.0s
- 6.5s: Fully Loaded Time: 6.5s

<https://gtmetrix.com/reports/larroude.com/CSXUzv8z/>



Cache & Storage

Cache and Storage concepts



Basics Concepts



Caching is a technique that stores copies of files or data in fast-access locations to improve performance. There are several types of caching that can be applied to a website, including:

Browser Cache: Stores static resources in the user's browser.

Server Cache: Stores data on the server to reduce response time.

CDN (Content Delivery Network): Distributes resources across geographically diverse servers to improve delivery speed.

Caching Techniques



1. Browser Cache:

- Set Cache Headers:

Use HTTP headers like **Cache-Control**, **Expires**, and **ETag**.

Example:

```
http
```

```
Cache-Control: max-age=31536000, public
```

1. Storage of Static Resources:

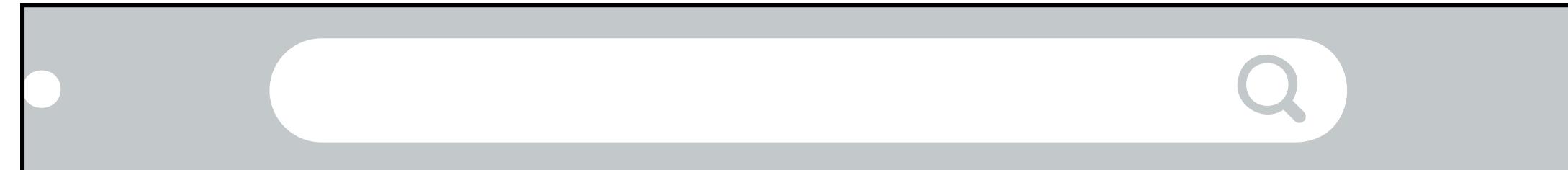
- Set long cache periods for resources that do not change frequently (images, CSS, JS).



2. Server Cache:

- **Full Page Cache:** Stores the complete HTML version of a page for subsequent users. Tools like Varnish or server cache plugins (e.g., WP Super Cache for WordPress).
- **Fragment Cache:** Stores specific parts of a page, such as headers or footers.
- **3. CDN (Content Delivery Network): Use a CDN:** Services like Cloudflare, Akamai, or AWS CloudFront can distribute your content globally. Configuration: Typically requires changing DNS records to point to the CDN.

Implementation on Shopify:



A screenshot of a Shopify search bar. The placeholder text 'Search' is visible inside the input field, which has a light gray background and rounded corners. A magnifying glass icon is positioned to the right of the input field.

- 1. Browser Cache:**
 - Configuration: Use Shopify's Liquid theme to set cache headers. Example:

```
<meta http-equiv="Cache-Control" content="public, max-age=31536000">
```
- 2. Server Cache:**
 - **Shopify Dynamic Cache:** Shopify has an internal cache for dynamic pages. Make sure not to disable it inadvertently.
- 3. CDN:**
 - **Automatic Configuration:** Shopify uses CDNs to deliver static content. Ensure it is enabled in the store settings.

Analysis of Cache Headers



1. Important Response Headers:

The screenshot shows a Microsoft Edge browser window displaying a product page for a black high-heeled shoe. The Network tab of the developer tools is open, showing a list of resources. One resource, '7726.js?v=3.106.2', is selected, and its response headers are displayed in detail. The 'Cache-Control' header is present with the value 'public, max-age=15768000'. Other headers shown include 'ETag', 'Content-Type', 'Last-Modified', and 'X-Cache'.

- **Cache-Control:** public, max-age=15768000: Allows caching by any cache with a max duration of ~6 months.
- **ETag:** A unique identifier for the resource version, facilitating efficient cache usage.
- **Last-Modified:** Date and time of the last modification: Wed, 07 Aug 2024 19:12:00 GMT.
- **X-Cache:** TCP_HIT: Indicates a cache hit, enhancing performance.

2. What These Headers Indicate:

- **Cache-Control:** Efficient caching for static resources, valid for up to 6 months.
- **ETag & Last-Modified:** Validate cache to determine if a new fetch is necessary.
- **X-Cache:** Confirms the resource was served from the cache, ensuring the cache is working correctly.

DONE

← → C gtmetrix.com/compare/Ya397ol8/qfgHraGY

⋮ Anônimas (2)

Todos os favoritos

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<https://larroude.com/>

Fri, Aug 9, 2024 8:16 AM -0700

Vancouver, Canada

Chrome 117.0.0.0

https://larroude.com/?_ab=0&_fd=0&_sc=1

Fri, Aug 9, 2024 8:17 AM -0700

Vancouver, Canada

Chrome 117.0.0.0

GTmetrix Grade	D (62%)
Performance Score	52%
Structure Score	76%
Largest Contentful Paint	2.5s
Total Blocking Time	661ms
Cumulative Layout Shift	0
Total Page Size	5.67MB
Total # of Requests	279

GTmetrix Grade	D (62%)
Performance Score	52%
Structure Score	76%
Largest Contentful Paint	2.4s -135ms
Total Blocking Time	718ms +57ms
Cumulative Layout Shift	0
Total Page Size	5.89MB +234KB
Total # of Requests	292 +13

<https://gtmetrix.com/compare/Ya397ol8/qfgHraGY>



Shopify & GTmetrix Monitoring

Shopify monitoring



1. Shopify

- During the last 12 weeks, the site was monitored through Shopify, showing significantly better results.

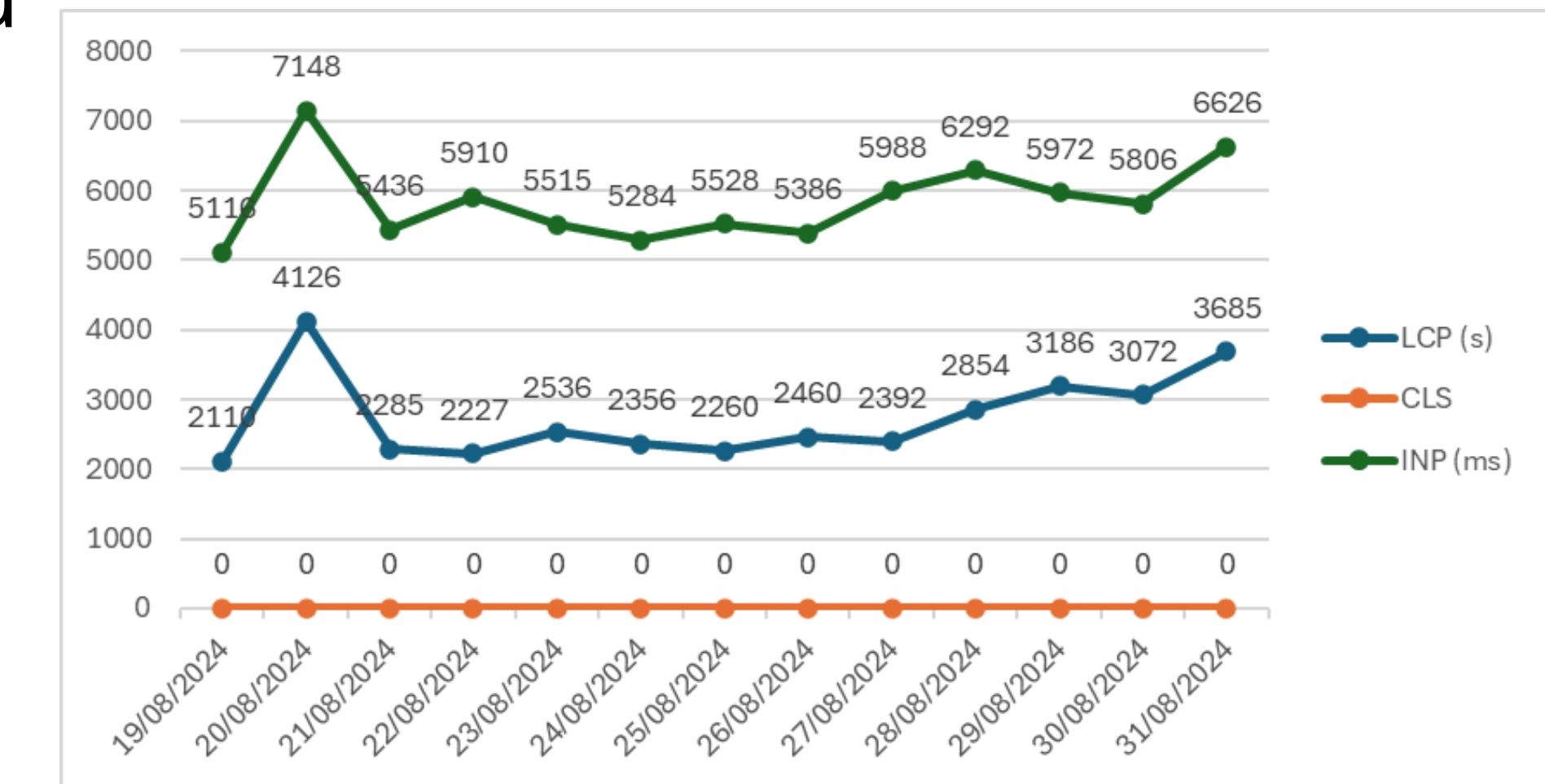


GTmetrix monitoring



1. GTmetrix

- In August, we conducted a 1-month monitoring through GTMetrix, which also resulted in good outcomes.



Improvement date



1. Changes

- On July 27 and August 19, improvements were made to the site, where we removed animations and started using images in WebP format.



Brazil is experiencing its worst floods in 80 years, with dozens of lives lost and many people still missing.



Results

Shopify Analysis



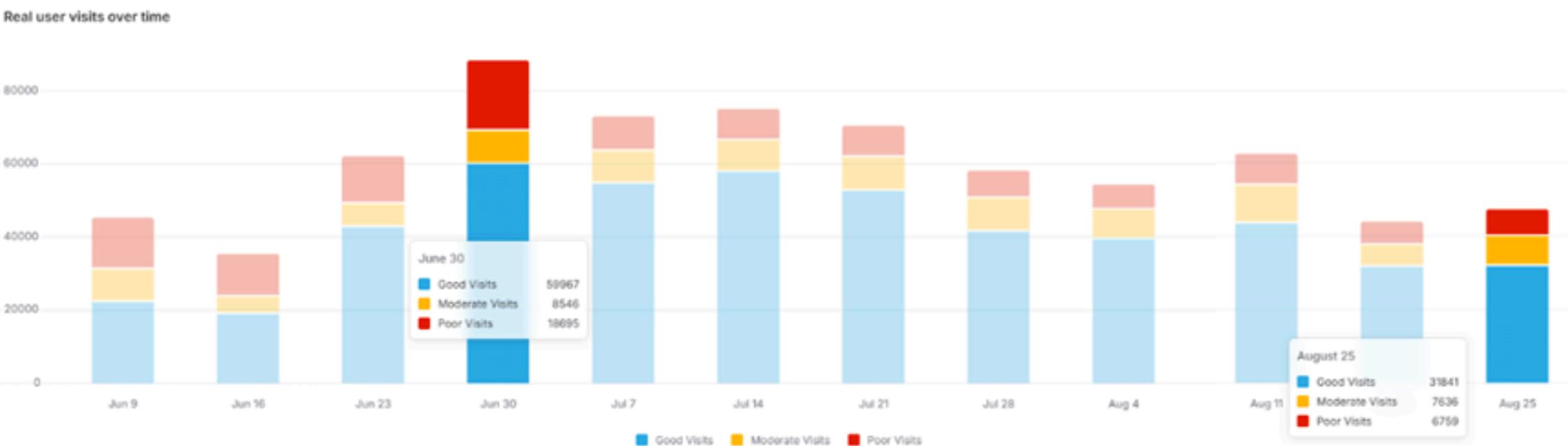
12 weeks

- Performance monitored LCP and INP



June 9th - 16th

- LCP above recommended, **24.65% visits** 'poor'



Largest Contentful Paint (LCP)

● Good

▢ Moderate

○ Poor

0 - 2.5 seconds

2.5 - 4 seconds

> 4 seconds

Interaction to Next Paint (INP)

● Good

▢ Moderate

○ Poor

0 - 200 milliseconds

200 - 500 milliseconds

> 500 milliseconds

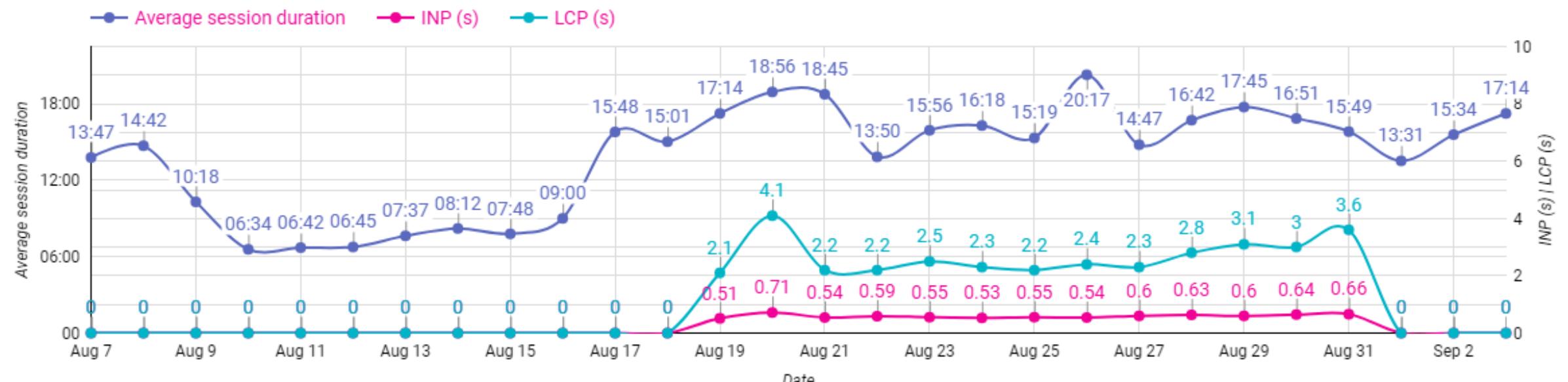
Data cross-referencing



1. Average Session Duration:

- There was a significant increase in session duration after the optimizations, especially from **August 19th**, when animations were removed and the site's response time improved. This reflects a better user experience.

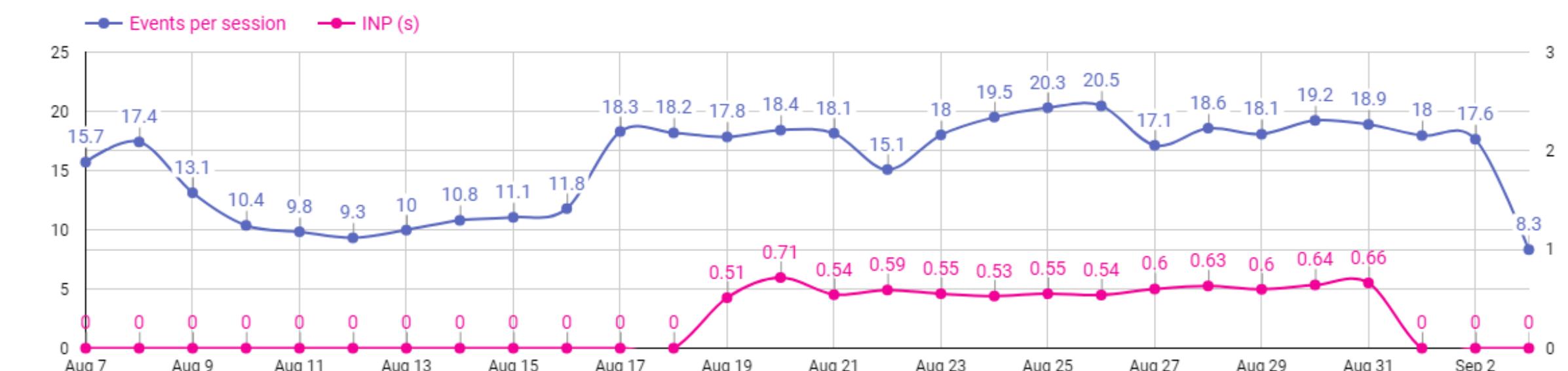
Average Session Duration (sec)



2. Events per Session:

- The number of events per session also progressively increased after the improvements, showing that users were interacting more with the site due to faster loading times and improved responsiveness.

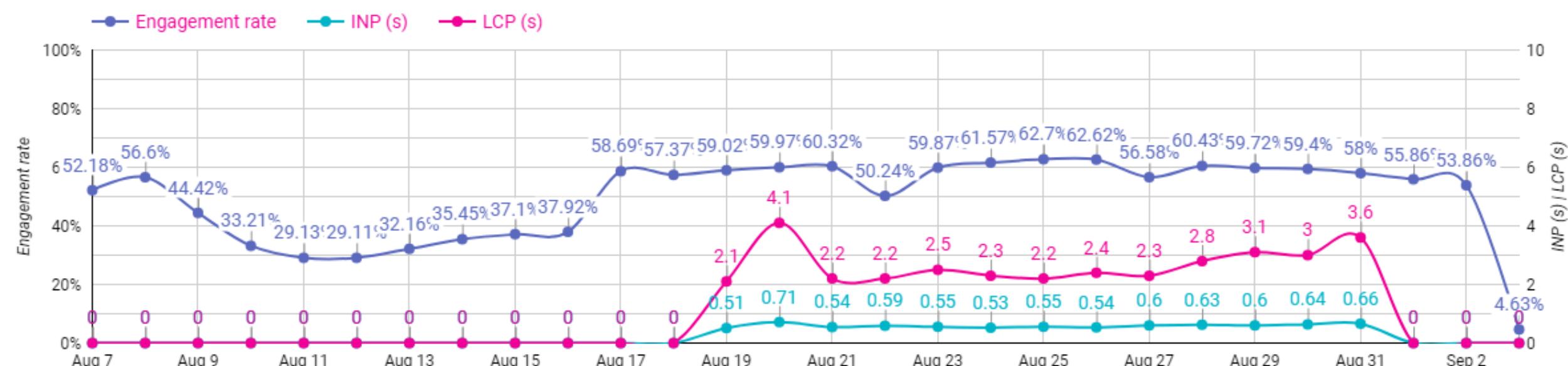
Events per Session



1. Engagement Rate:

- The engagement rate increased significantly after the improvements, especially after August 19th, when animations were removed. The improvement in visit quality and site responsiveness drove this increase.

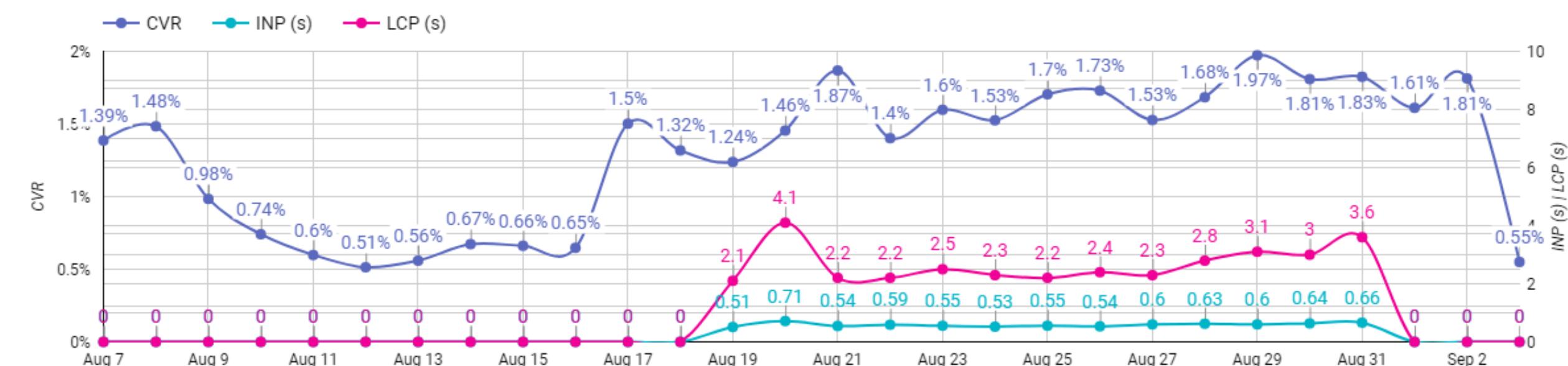
Engagement Rate



2. Conversion Rate:

- The conversion rate showed a clear upward trend after the optimizations. The peak in conversion occurred on August 19th, when animations were removed, significantly improving the site's response time and user interactivity.

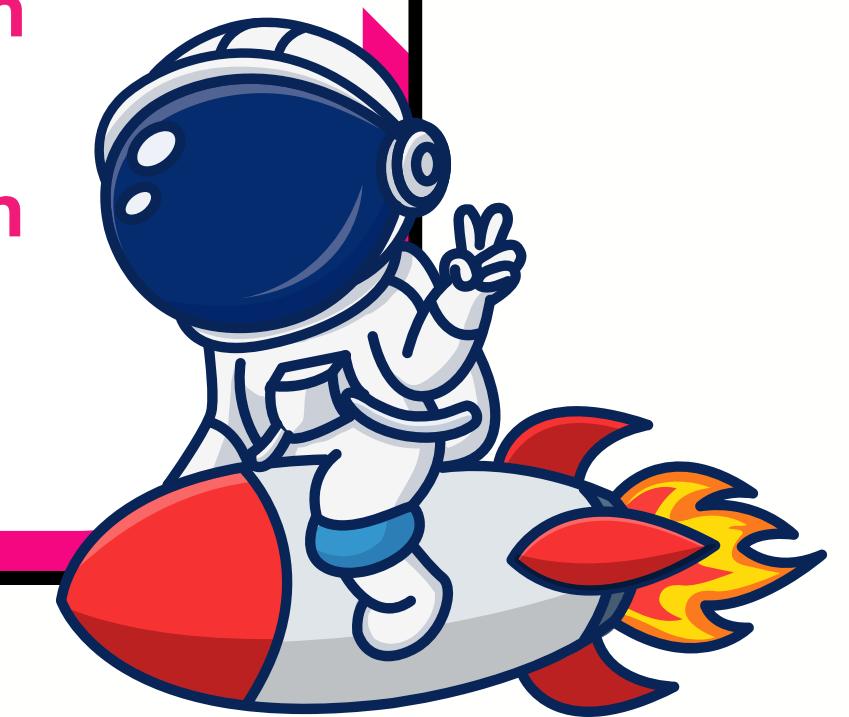
Conversion Rate

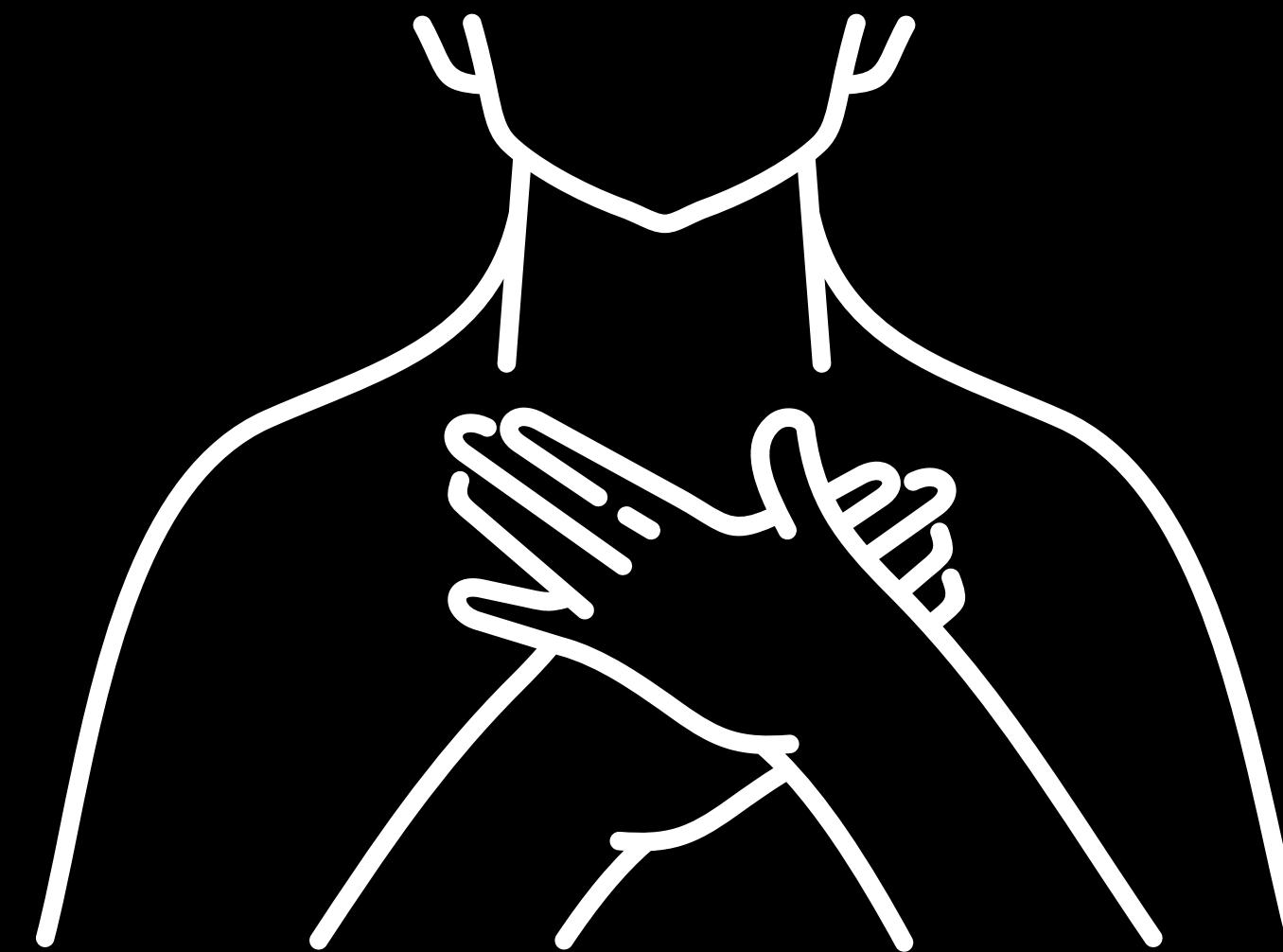




Conclusion

- The optimizations, particularly the removal of animations on **August 19th**, led to significant improvements in the site's performance. Key metrics such as session duration, engagement rate, and conversion rate all showed notable increases. These changes improved the site's responsiveness and overall user experience, **resulting in more meaningful interactions, higher engagement, and an increase in conversions. The improvements in LCP and INP metrics were critical in driving these positive outcomes.**





Thank you!