Performance Analysis

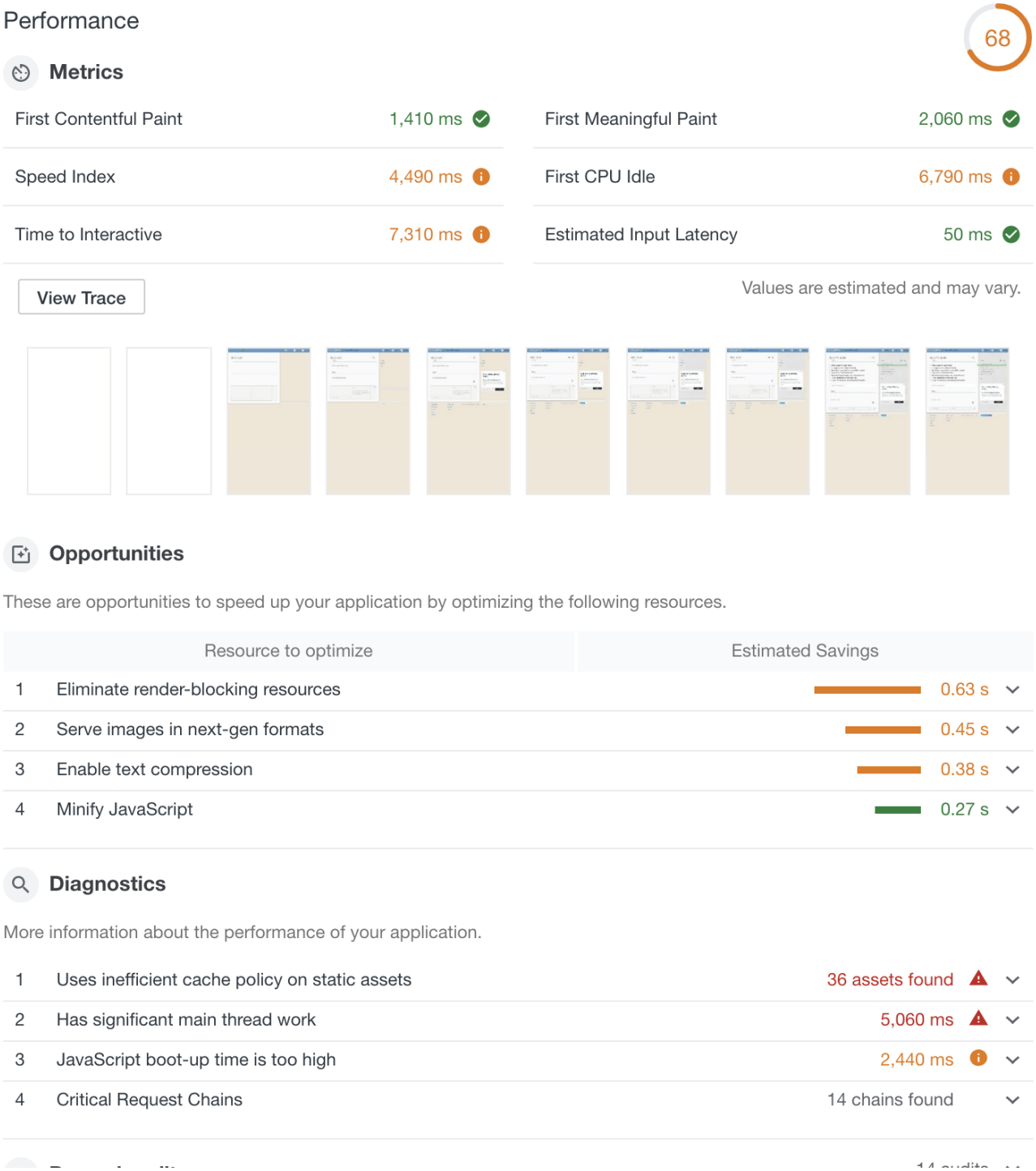


Figure 1.1 *The Baseline Audit Report of the Competitor's website*

I. Metrics section

The overall score is 68, means that we have lots of things to do in order to improve the performance of the website.

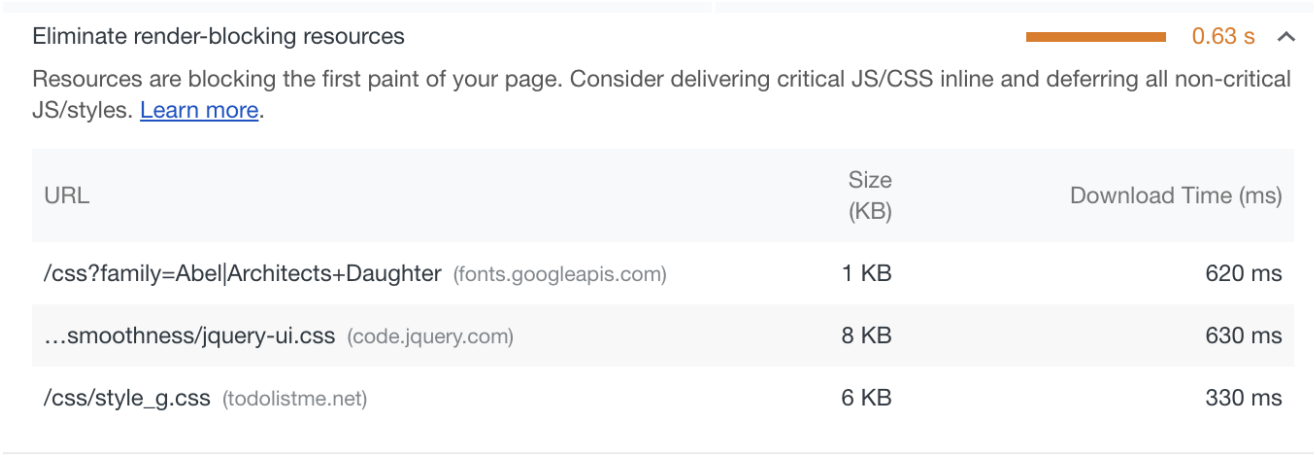
Time to Interactive & First CPU Idle are 7210ms and 6790ms respectively, which indicates that there is maybe unnecessary Javascript work occuring during page load.

Speed Index metric is **4490ms**, which is quite high. This indicates that the content of the site need to be optimized.

Continue with the Screenshort during page load. The Ads from google is displayed before the Lists (top-right) section is displayed. This is due to the order of scripts-loading in the index.html file.

II. Opotunities section

2.1 Eliminate render-blocking resources



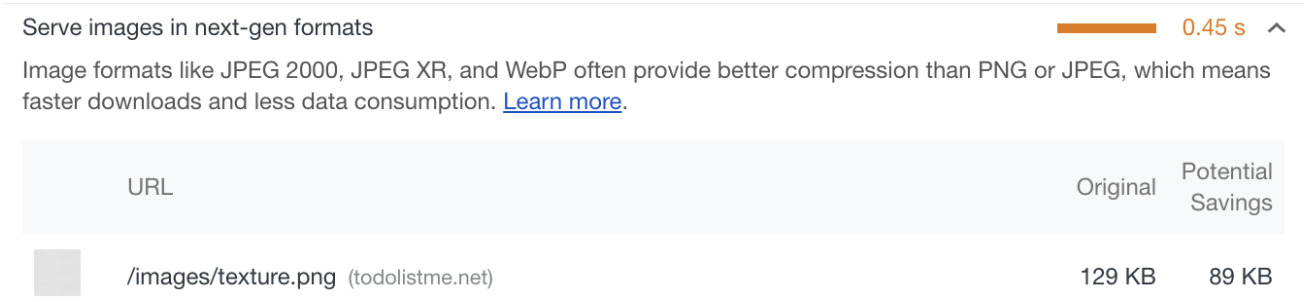
Eliminate render-blocking resources — 0.63 s

Resources are blocking the first paint of your page. Consider delivering critical JS/CSS inline and deferring all non-critical JS/styles. Learn more.

URL	Size (KB)	Download Time (ms)
/css?family=Abel|Architects+Daughter (fonts.googleapis.com)	1 KB	620 ms
…smoothness/jquery-ui.css (code.jquery.com)	8 KB	630 ms
/css/style_g.css (todolistme.net)	6 KB	330 ms

These resources are placed in the <head> tag inside index.html file, which is fine. But the **dev.version** jquery-ui.css is being used instead of **minified** version.

2.2 Serve images in next-gen formats



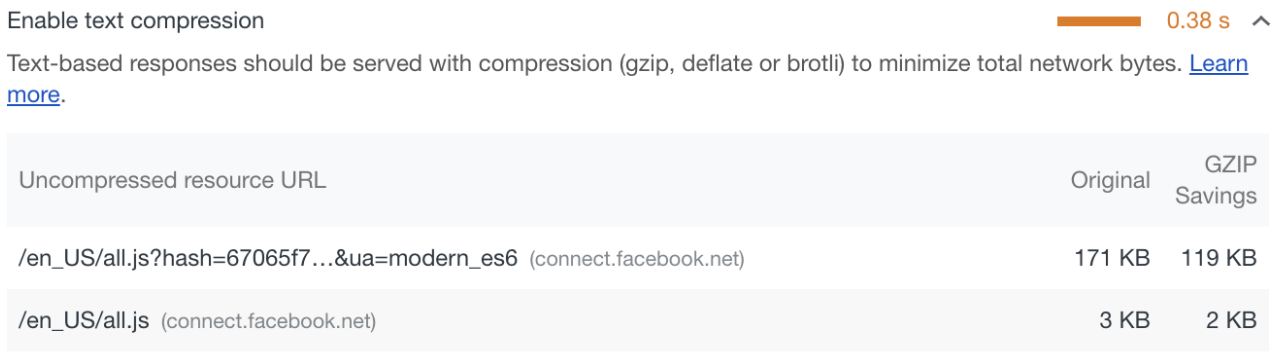
Serve images in next-gen formats — 0.45 s

Image formats like JPEG 2000, JPEG XR, and WebP often provide better compression than PNG or JPEG, which means faster downloads and less data consumption. Learn more.

URL	Original	Potential Savings
/images/texture.png (todolistme.net)	129 KB	89 KB

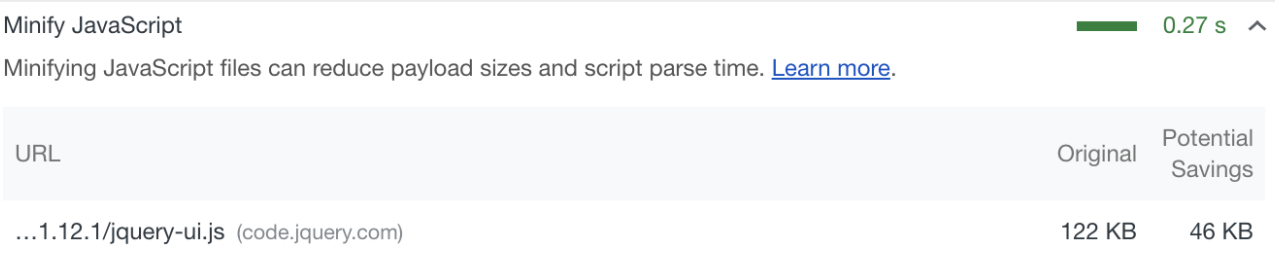
We can consider converting the image format from PNG to a more suitable format. Because the image texture.png is not an image with transparent background.

2.3 Enable text compression



solution: by using compression middleware in the server-side, the text-based responses's size can be minimized, which can speed up the page load.

2.4 Minify the Javascript file



The **jquery-ui.js** *(line 248)* is not minified. Consider serving the site with a minified version can speed up the page loading.

III. Diagnostics

1. Uses inefficient cache policy on static assets.

URL	Cache TTL	Size (KB)
/images/texture.png (todolistme.net)	None	129 KB
/javascript/javascript_e.js (todolistme.net)	None	9 KB
/javascript/lists.js (todolistme.net)	None	9 KB
/css/style_g.css (todolistme.net)	None	6 KB
/images/tick.png (todolistme.net)	None	6 KB
/images/undo.png (todolistme.net)	None	2 KB
/javascript/lib.js (todolistme.net)	None	2 KB
/images/top_sync_waiting.png (todolistme.net)	None	1 KB
/images/top_sync.png (todolistme.net)	None	1 KB
/images/top_sync_on.png (todolistme.net)	None	1 KB
/images/top_sync_error.png (todolistme.net)	None	1 KB
/images/purge.png (todolistme.net)	None	1 KB
/images/arrow_down.png (todolistme.net)	None	1 KB
/images/arrow_up.png (todolistme.net)	None	1 KB
/images/top_new_window.png (todolistme.net)	None	1 KB
/images/print.png (todolistme.net)	None	1 KB
/images/top_saved.png (todolistme.net)	None	1 KB
/images/top_not_saved.png (todolistme.net)	None	1 KB
/images/category_down.png (todolistme.net)	None	1 KB
/images/category_up.png (todolistme.net)	None	1 KB
/images/addlist.png (todolistme.net)	None	1 KB
/images/info.png (todolistme.net)	None	0 KB
/images/adddivider.png (todolistme.net)	None	0 KB
/images/copy.png (todolistme.net)	None	0 KB
/images/sort_order.png (todolistme.net)	None	0 KB
/images/delete.gif (todolistme.net)	None	0 KB
/en_US/all.js (connect.facebook.net)	20 m	4 KB
/widgets.js (platform.twitter.com)	30 m	28 KB
/js/plusone.js (apis.google.com)	30 m	17 KB
/pagead/show_ads.js (pagead2.googlesyndication.com)	1 h	22 KB

There are some static assets that wont need to be updated / changed in the next few months (libs, images, icon, logo,...). Consider enalbing / increase **Cach-Control: max-age** in the HTTP response header can speed up page load time on repeat visits
3.2 Significant main thread work **(6270ms)**

1 Has significant main thread work 6,270 ms

Consider reducing the time spent parsing, compiling and executing JS. You may find delivering smaller JS payloads helps with this.

Category	Time Spent
Script Evaluation	2,999 ms
Other	2,132 ms
Rendering	602 ms
Style & Layout	177 ms
Script Parsing & Compilation	159 ms
Garbage Collection	119 ms
Parse HTML & CSS	83 ms

which indicates that the server has delivered a too big amount of JS.

3.3 Javascript boot-up time is too high.

JavaScript boot-up time is too high 2,990 ms

Consider reducing the time spent parsing, compiling, and executing JS. You may find delivering smaller JS payloads helps with this. Learn more.

URL	Total	Script Evaluation	Script Parsing & Compilation
…r20100101/osd.js (pagead2.googlesyndication.co…	911 ms	820 ms	1 ms
/javascript/javascript_e.js (todolistme.net)	490 ms	468 ms	4 ms
/jquery-2.2.4.min.js (code.jquery.com)	281 ms	220 ms	22 ms
…rs=AGLTcCNXl…/cb=gapi.loaded_0 (apis.googl…	239 ms	208 ms	31 ms
/js/plusone.js (apis.google.com)	213 ms	208 ms	2 ms
…r20180604/show_ads_impl.js (pagead2.googles…	188 ms	170 ms	4 ms
/en_US/all.js?hash=d81ca38…&ua=modern_es…	175 ms	149 ms	9 ms
/widgets.js (platform.twitter.com)	167 ms	158 ms	2 ms
/pagead/show_ads.js (pagead2.googlesyndication.c…	139 ms	75 ms	16 ms
…1.12.1/jquery-ui.js (code.jquery.com)	115 ms	54 ms	54 ms
/ga.js (www.google-analytics.com)	73 ms	70 ms	1 ms

We can see at the first place is a JS file from google, which probaly loads Advertisements to the website. And the Script Evaluation time for this file is highest. Consider removing the script from index.html to speed up the page load.

We can open the tab Request Blocking and simulately block this JS file. Now look at the result

Minimizes main thread work 2,640 ms

JavaScript boot-up time 1,590 ms

Consider reducing the time spent parsing, compiling, and executing JS. You may find delivering smaller JS payloads helps with this. Learn more.

URL	Total	Script Evaluation	Script Parsing & Compilation
/jquery-2.2.4.min.js (code.jquery.com)	259 ms	204 ms	15 ms
…r20180604/show_ads_impl.js (pagead2.googles…	218 ms	160 ms	5 ms
/js/plusone.js (apis.google.com)	166 ms	154 ms	2 ms
/pagead/show_ads.js (pagead2.googlesyndication.c..	165 ms	82 ms	16 ms
/en_US/all.js?hash=c1f0ef0…&ua=modern_es6 (…	161 ms	143 ms	6 ms
/widgets.js (platform.twitter.com)	128 ms	117 ms	1 ms
…r20100101/osd.js (pagead2.googlesyndication.co…	111 ms	96 ms	2 ms
…1.12.1/jquery-ui.js (code.jquery.com)	108 ms	52 ms	40 ms
…rs=AGLTcCNXI…/cb=gapi.loaded_0 (apis.googl…	104 ms	100 ms	4 ms
…rs=AGLTcCNXI…/cb=gapi.loaded_1 (apis.googl…	87 ms	65 ms	19 ms
/ga.js (www.google-analytics.com)	79 ms	67 ms	1 ms

A big win!

And now look at the overall after blocking the Ads from google.

Performance

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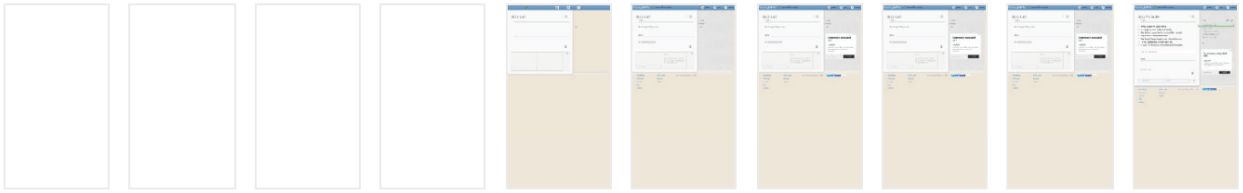
Metrics

First Contentful Paint	1,240 ms	First Meaningful Paint	1,260 ms
Speed Index	4,640 ms	First CPU Idle	2,170 ms
Time to Interactive	2,240 ms	Estimated Input Latency	13 ms

View Trace

Values are estimated and may vary.



Opportunities

These are opportunities to speed up your application by optimizing the following resources.

	Resource to optimize	Estimated Savings
1	Keep server response times low (TTFB)	1.6 s
2	Avoid multiple, costly round trips to any origin	0.3 s

Diagnostics

More information about the performance of your application.

1	Text is invisible while webfonts are loading	
2	Has significant main thread work	3,160 ms
3	JavaScript boot-up time	1,710 ms
4	Uses efficient cache policy on static assets	36 assets found
5	Critical Request Chains	15 chains found

Passed audits

15 audits

Now compare with the performance of our website.

Performance

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Metrics

First Contentful Paint	1,780 ms	First Meaningful Paint	1,780 ms
Speed Index	1,780 ms	First CPU Idle	1,780 ms
Time to Interactive	1,780 ms	Estimated Input Latency	13 ms

View Trace

Values are estimated and may vary.

Opportunities

These are opportunities to speed up your application by optimizing the following resources.

	Resource to optimize	Estimated Savings
1	Eliminate render-blocking resources	0.31 s

Resources are blocking the first paint of your page. Consider delivering critical JS/CSS inline and deferring all non-critical JS/styles. Learn more.

URL	Size (KB)	Download Time (ms)
…todomvc-common/base.css (127.0.0.1)	2 KB	150 ms
…todomvc-app-css/index.css (127.0.0.1)	7 KB	450 ms

Diagnostics

More information about the performance of your application.

1	Critical Request Chains	10 chains found

Passed audits

20 audits