

Opportunities

These optimizations can speed up your page load.			
	Opportunity	Estimated Savings	
1	Properly size images	1.35 s	^
	Serve images that are appropriately-sized to save cellul	ılar data and improve load time. <u>Learn more</u> .	
	URL		Siz (KE
	1000/1*2PCmLZyzQjpeg (cdn-images-1.medium.c	om)	201 KI
	52fe823/nasa-has-determined-where-the-mysteri	ous-jelly-dojpg (static2.businessinsider.com)	158 K

Siz URL (KE ...800/1*IQqkmPXYZ....jpeg (cdn-images-1.medium.com) 116 K 2 1.35 s ^ Serve images in next-gen formats 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. Siz **URL** (KE ...52fe823.../nasa-has-determined-where-the-mysterious-jelly-do....jpg (static2.businessinsider.com) 158 K /data_images/148917.png (hanslodge.com) 148 K ...1000/1*2PCmLZyzQ....jpeg (cdn-images-1.medium.com) 201 K ...800/1*IQqkmPXYZ....jpeg (cdn-images-1.medium.com) 116 K 0.15 s ^ 3 Efficiently encode images Optimized images load faster and consume less cellular data. Learn more. Siz URL (KE52fe823.../nasa-has-determined-where-the-mysterious-jelly-do....jpg (static2.businessinsider.com) 158 KI **Diagnostics** More information about the performance of your application. 1 Ensure text remains visible during webfont load Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading. Learn more. Potential **URL** Savings (ms) ...v15/mem8YaGs1....woff2 (fonts.gstatic.com) 100 ms 2 Serve static assets with an efficient cache policy 7 resources found 🛕 🔨

A long cache lifetime can speed up repeat visits to your page. Learn more.

3 Minimize Critical Requests Depth 4 chains found	d ^	
800/1*IQqkmPXYZjpeg (cdn-images-1.medium.com)	30 d	116
1000/1*2PCmLZyzQjpeg (cdn-images-1.medium.com)		201
52fe823/nasa-has-determined-where-the-mysterious-jelly-dojpg (static2.businessinsider.com)		158
/css?family=Open+Sans (fonts.googleapis.com)	1 d	1
/html-semantique/style.css (cevaho.github.io)	10 m	1
/html-semantique/normalize.css (cevaho.github.io)	10 m	2
/data_images/148917.png (hanslodge.com)	None	148
URL	Cache TTL	(

The Critical Request Chains below show you what resources are loaded with a high priority. Consider reducing the length of chains, reducing the download size of resources, or deferring the download of unnecessary resources to improve page load. Learn more.

Maximum critical path latency: 290 ms

Initial Navigation

/html-semantique/ (cevaho.github.io)

/html-semantique/normalize.css (cevaho.github.io) - 10 ms, 1.85 KB

/css?family=Open+Sans (fonts.googleapis.com) - 130 ms, 0.58 KB

/html-semantique/style.css (cevaho.github.io) - 10 ms, 1.07 KB

...v15/mem8YaGs1....woff2 (fonts.gstatic.com) - 100 ms, 8.94 KB

Passed audits

16 audits ^

Eliminate render-blocking resources

Potential savings of 30 ms <a> ^



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)	Potential Savings (ms)
/css?family=Open+Sans (fonts.googleapis.com)	1 KB	780 ms
2 Defer offscreen images		⊘ ^

Consider lazy-loading offscreen and hidden images after all critical resources have finished loading to lower time to interactive. Learn more.

5/201	2 Lighthouse Report		
3	Minify CSS	V	^
	Minifying CSS files can reduce network payload sizes. <u>Learn more</u> .		
4	Minify JavaScript	Ø	^
	Minifying JavaScript files can reduce payload sizes and script parse time. <u>Learn more</u> .		
5	Defer unused CSS	Ø	^
	Remove unused rules from stylesheets to reduce unnecessary bytes consumed by network act <u>Learn more</u> .	ivity.	
6	Enable text compression	Ø	^
	Text-based resources should be served with compression (gzip, deflate or brotli) to minimize to network bytes. <u>Learn more</u> .	tal	
7	Preconnect to required origins	Ø	^
	Consider adding preconnect or dns-prefetch resource hints to establish early connections to important third-party origins. <u>Learn more</u> .		
8	Server response times are low (TTFB) Root document took 10 m	s 🗸	^
	Time To First Byte identifies the time at which your server sends a response. <u>Learn more</u> .		
9	Avoid multiple page redirects	②	^
	Redirects introduce additional delays before the page can be loaded. <u>Learn more</u> .		
10	Preload key requests	Ø	^
	Consider using <link rel="preload"/> to prioritize fetching resources that are currently requested la page load. <u>Learn more</u> .	ater in	
11	Use video formats for animated content	Ø	^
	Large GIFs are inefficient for delivering animated content. Consider using MPEG4/WebM video animations and PNG/WebP for static images instead of GIF to save network bytes. Learn more		
12	Avoids enormous network payloads Total size was 647 KI	в 🗸	^
	Large network payloads cost users real money and are highly correlated with long load times. <u>I</u> more.	<u>-earn</u>	
URI			Size (KB)
10	000/1*2PCmLZyzQjpeg (cdn-images-1.medium.com)	200.8	3 KB
52	2fe823/nasa-has-determined-where-the-mysterious-jelly-dojpg (static2.businessinsider.com)	158.5	5 KB
/dat	a_images/148917.png (hanslodge.com)	148.2	2 KB
80	00/1*IQqkmPXYZjpeg (cdn-images-1.medium.com)	116	6 KB
V.	L5/mem8YaGs1woff2 (fonts.gstatic.com)	8.8) KB

13 Avoids an excessive DOM size

117 nodes

Browser engineers recommend pages contain fewer than ~1,500 DOM nodes. The sweet spot is a tree depth < 32 elements and fewer than 60 children/parent element. A large DOM can increase memory usage, cause longer <u>style calculations</u>, and produce costly <u>layout reflows</u>. <u>Learn more</u>.

Statistic	Element	Value
Total DOM Nodes 117		
Maximum DOM Depth <pre></pre>		9
Maximum Child Elements <section> 1</section>		
14 User Timing marks and measures		② ^
Consider instrumenting your app with the User Timing API to measure your app's real-world performance during key user experiences. <u>Learn more</u> .		
15 JavaScript execution time		⊘ ^
Consider reducing the time spent parsing, compiling, and executing JS. You may find delivering smaller JS payloads helps with this. <u>Learn more</u> .		
16 Minimizes main-thread work		0.9 s 🕗 🔨

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

Category	Time Spent
Style & Layout	468 ms
Rendering	246 ms
Other	166 ms
Parse HTML & CSS	30 ms
Script Evaluation	27 ms
Script Parsing & Compilation	3 ms

Accessibility

These checks highlight opportunities to <u>improve the accessibility of your web app</u>. Only a subset of accessibility issues can be automatically detected so manual testing is also encouraged.



Q Additional items to manually check

12 audits ^

These items address areas which an automated testing tool cannot cover. Learn more in our guide on conducting an accessibility review.

1 [accesskey] values are unique

^

Access keys let users quickly focus a part of the page. For proper navigation, each access key must be unique. <u>Learn more</u>.

2 The page has a logical tab order

^

Tabbing through the page follows the visual layout. Users cannot focus elements that are offscreen. <u>Learn more</u>.

3 Interactive controls are keyboard focusable

^

Custom interactive controls are keyboard focusable and display a focus indicator. Learn more.

4 Interactive elements indicate their purpose and state

^

Interactive elements, such as links and buttons, should indicate their state and be distinguishable from non-interactive elements. <u>Learn more</u>.

5 The user's focus is directed to new content added to the page

^

If new content, such as a dialog, is added to the page, the user's focus is directed to it. Learn more.

6 User focus is not accidentally trapped in a region

^

A user can tab into and out of any control or region without accidentally trapping their focus. <u>Learn more</u>.

7 Custom controls have associated labels

^

Custom interactive controls have associated labels, provided by aria-label or aria-labelledby. <u>Learn</u> <u>more</u>.

8 Custom controls have ARIA roles

. . .

Custom interactive controls have appropriate ARIA roles. Learn more.

9 Visual order on the page follows DOM order

. .

DOM order matches the visual order, improving navigation for assistive technology. Learn more.

10 Offscreen content is hidden from assistive technology

^

Offscreen content is hidden with display: none or aria-hidden=true. Learn more.

11 Headings don't skip levels

^

Headings are used to create an outline for the page and heading levels are not skipped. Learn more.

12 HTML5 landmark elements are used to improve navigation

Landmark elements (<main>, <nav>, etc.) are used to improve the keyboard navigation of the page for assistive technology. <u>Learn more</u>.

✓ Passed audits

12 audits ^

1 The page contains a heading, skip link, or landmark region



Adding ways to bypass repetitive content lets keyboard users navigate the page more efficiently. <u>Learn more</u>.

2 Background and foreground colors have a sufficient contrast ratio



Low-contrast text is difficult or impossible for many users to read. Learn more.

3 Document has a <title> element



The title gives screen reader users an overview of the page, and search engine users rely on it heavily to determine if a page is relevant to their search. Learn more.

4 [id] attributes on the page are unique



The value of an id attribute must be unique to prevent other instances from being overlooked by assistive technologies. <u>Learn more</u>.

5 <html> element has a [lang] attribute



If a page doesn't specify a lang attribute, a screen reader assumes that the page is in the default language that the user chose when setting up the screen reader. If the page isn't actually in the default language, then the screen reader might not announce the page's text correctly. Learn more.

6 <html> element has a valid value for its [lang] attribute



Specifying a valid <u>BCP 47 language</u> helps screen readers announce text properly. <u>Learn more</u>.

7 Image elements have [alt] attributes



Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with an empty alt attribute. <u>Learn more</u>.

8 Links have a discernible name



Link text (and alternate text for images, when used as links) that is discernible, unique, and focusable improves the navigation experience for screen reader users. <u>Learn more</u>.

9 Lists contain only elements and script supporting elements (<script> and <template>).



Screen readers have a specific way of announcing lists. Ensuring proper list structure aids screen reader output. Learn more.

10 List items () are contained within or parent elements



Screen readers require list items (`') to be contained within a parent `' or `` to be announced properly. <u>Learn more</u>.

11 Cells in a element that use the [headers] attribute only refer to other cells of that same table.

.

Screen readers have features to make navigating tables easier. Ensuring `` cells using the `[headers]` attribute only refer to other cells in the same table may improve the experience for screen reader users. Learn more.

12 elements and elements with [role="columnheader"/"rowheader"] have data cells they describe.



Screen readers have features to make navigating tables easier. Ensuring table headers always refer to some set of cells may improve the experience for screen reader users. <u>Learn more</u>.

Not applicable

22 audits ^

1 [aria-*] attributes match their roles



Each ARIA `role` supports a specific subset of `aria-*` attributes. Mismatching these invalidates the `aria-*` attributes. Learn more.

2 [role]s have all required [aria-*] attributes



Some ARIA roles have required attributes that describe the state of the element to screen readers. <u>Learn more</u>.

3 Elements with [role] that require specific children [role]s, are present



Some ARIA parent roles must contain specific child roles to perform their intended accessibility functions. <u>Learn more</u>.

4 [role]s are contained by their required parent element



Some ARIA child roles must be contained by specific parent roles to properly perform their intended accessibility functions. <u>Learn more</u>.

5 [role] values are valid



ARIA roles must have valid values in order to perform their intended accessibility functions. <u>Learn more</u>.

6 [aria-*] attributes have valid values



Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid values. <u>Learn more</u>.

7 [aria-*] attributes are valid and not misspelled



Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid names. <u>Learn</u> <u>more</u>.

8 <audio> elements contain a <track> element with [kind="captions"]



Captions make audio elements usable for deaf or hearing-impaired users, providing critical information such as who is talking, what they're saying, and other non-speech information. <u>Learn more</u>.

9 Buttons have an accessible name

When a button doesn't have an accessible name, screen readers announce it as "button", making it unusable for users who rely on screen readers. Learn more.

10 <dl>'s contain only properly-ordered <dt> and <dd> groups, <script> or <template> elements.



When definition lists are not properly marked up, screen readers may produce confusing or inaccurate output. <u>Learn more</u>.

11 Definition list items are wrapped in <dl> elements



Definition list items ('<dt>' and '<dd>') must be wrapped in a parent '<dl>' element to ensure that screen readers can properly announce them. <u>Learn more</u>.

12 <frame> or <iframe> elements have a title



Screen reader users rely on frame titles to describe the contents of frames. Learn more.

13 <input type="image"> elements have [alt] text



When an image is being used as an `<input>` button, providing alternative text can help screen reader users understand the purpose of the button. <u>Learn more</u>.

14 Form elements have associated labels



Labels ensure that form controls are announced properly by assistive technologies, like screen readers. <u>Learn more</u>.

15 Presentational elements avoid using , <caption> or the [summary] attribute.



A table being used for layout purposes should not include data elements, such as the th or caption elements or the summary attribute, because this can create a confusing experience for screen reader users. <u>Learn more</u>.

16 The document does not use <meta http-equiv="refresh">



Users do not expect a page to refresh automatically, and doing so will move focus back to the top of the page. This may create a frustrating or confusing experience. <u>Learn more</u>.

17 [user-scalable="no"] is not used in the <meta name="viewport"> element and the [maximum-scale] attribute is not less than 5.



Disabling zooming is problematic for users with low vision who rely on screen magnification to properly see the contents of a web page. <u>Learn more</u>.

18 <object> elements have [alt] text



Screen readers cannot translate non-text content. Adding all text to `<object>` elements helps screen readers convey meaning to users. <u>Learn more</u>.

19 No element has a [tabindex] value greater than 0



A value greater than 0 implies an explicit navigation ordering. Although technically valid, this often creates frustrating experiences for users who rely on assistive technologies. <u>Learn more</u>.



9/15

20 [lang] attributes have a valid value

Specifying a valid BCP 47 language on elements helps ensure that text is pronounced correctly by a screen reader. Learn more.

21 <video> elements contain a <track> element with [kind="captions"]



When a video provides a caption it is easier for deaf and hearing impaired users to access its information. Learn more.

22 <video> elements contain a <track> element with [kind="description"]



Audio descriptions provide relevant information for videos that dialogue cannot, such as facial expressions and scenes. Learn more.

Best Practices



Does not use HTTPS





All sites should be protected with HTTPS, even ones that don't handle sensitive data. HTTPS prevents intruders from tampering with or passively listening in on the communications between your app and your users, and is a prerequisite for HTTP/2 and many new web platform APIs. Learn more.

Insecure URL

...52fe823.../nasa-has-determined-where-the-mysterious-jelly-do....jpg (static2.businessinsider.com)

2 Browser errors were logged to the console





Errors logged to the console indicate unresolved problems. They can come from network request failures and other browser concerns.

URL	Description
progressive-enhancement/bien.png?raw=true (github.com)	Failed to load resource: the server responded with a status of 404 (Not Found)
progressive-enhancement/mal.png (github.com)	Failed to load resource: the server responded with a status of 404 (Not Found)
progressive-enhancement/chat.png (github.com)	Failed to load resource: the server responded with a status of 404 (Not Found)

Passed audits

13 audits ^

Avoids Application Cache





Application Cache is deprecated. Learn more.

2 Uses HTTP/2 for its own resources HTTP/2 offers many benefits over HTTP/1.1, including binary headers, multiplexing, and server push. Learn more. 3 Uses passive listeners to improve scrolling performance Consider marking your touch and wheel event listeners as 'passive' to improve your page's scroll performance. Learn more. Avoids document.write() For users on slow connections, external scripts dynamically injected via 'document.write()' can delay page load by tens of seconds. Learn more. 5 Links to cross-origin destinations are safe Add `rel="noopener"` or `rel="noreferrer"` to any external links to improve performance and prevent security vulnerabilities. Learn more. 6 Avoids requesting the geolocation permission on page load Users are mistrustful of or confused by sites that request their location without context. Consider tying the request to user gestures instead. Learn more. 7 Page has the HTML doctype Specifying a doctype prevents the browser from switching to quirks-mode. Read more on the MDN Web Docs page 8 Avoids front-end JavaScript libraries with known security vulnerabilities Some third-party scripts may contain known security vulnerabilities that are easily identified and exploited by attackers. Learn more. **Detected JavaScript libraries** All front-end JavaScript libraries detected on the page. 10 Avoids requesting the notification permission on page load Users are mistrustful of or confused by sites that request to send notifications without context. Consider tying the request to user gestures instead. Learn more. 11 Avoids deprecated APIs Deprecated APIs will eventually be removed from the browser. Learn more. 12 Allows users to paste into password fields Preventing password pasting undermines good security policy. Learn more. 13 Displays images with correct aspect ratio Image display dimensions should match natural aspect ratio. <u>Learn more</u>.

SEO

These checks ensure that your page is optimized for search engine results ranking. There are additional factors Lighthouse does not check that may affect your search ranking. <u>Learn more</u>.



Mobile Friendly

Make sure your pages are mobile friendly so users don't have to pinch or zoom in order to read the content pages. <u>Learn more</u>.

Does not have a <meta name="viewport"> tag with width or initial-scale
No viewport meta tag found



Add a viewport meta tag to optimize your app for mobile screens. Learn more.

2 Document doesn't use legible font sizes



Text is illegible because of a missing viewport config

Font sizes less than 12px are too small to be legible and require mobile visitors to "pinch to zoom" in order to read. Strive to have >60% of page text ≥12px. <u>Learn more</u>.

Content Best Practices

Format your HTML in a way that enables crawlers to better understand your app's content.

Document does not have a meta description



Meta descriptions may be included in search results to concisely summarize page content. Learn more.

Crawling and Indexing

To appear in search results, crawlers need access to your app.

Page is blocked from indexing



Search engines are unable to include your pages in search results if they don't have permission to crawl them. <u>Learn more</u>.

Blocking Directive Source

<meta name="robots" content="noindex, nofollow" />

Additional items to manually check

2 audits ^

Run these additional validators on your site to check additional SEO best practices.

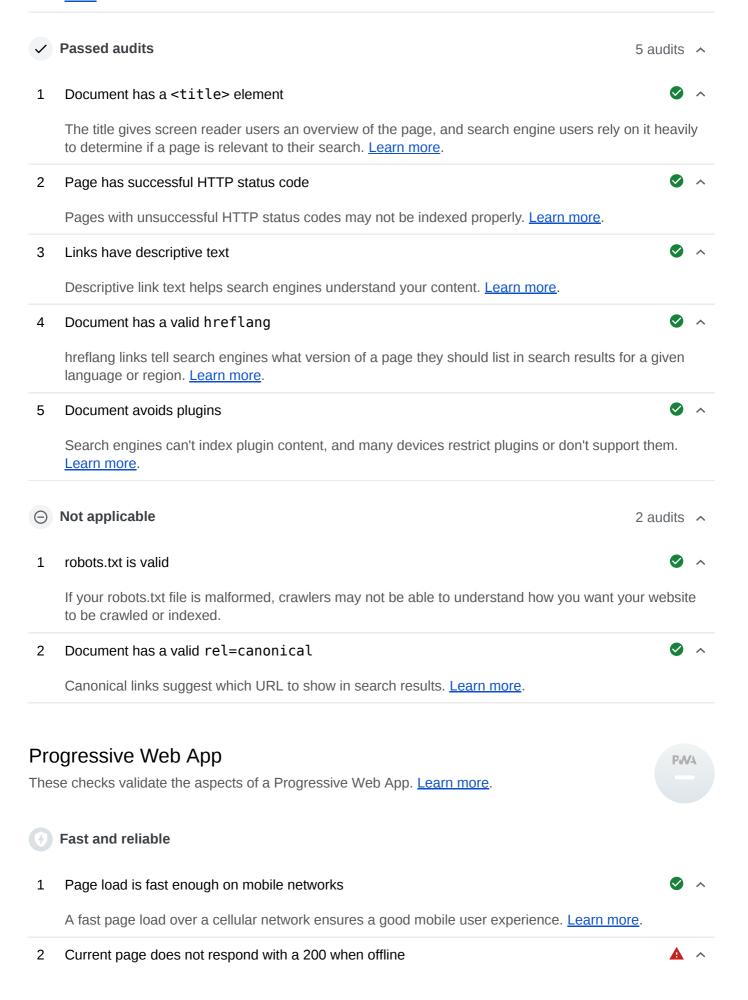
1 Page is mobile friendly

^

Take the <u>Mobile-Friendly Test</u> to check for audits not covered by Lighthouse, like sizing tap targets appropriately. <u>Learn more</u>.

2 Structured data is valid

Run the <u>Structured Data Testing Tool</u> and the <u>Structured Data Linter</u> to validate structured data. <u>Learn</u> more.



If you're building a Progressive Web App, consider using a service worker so that your app can work offline. Learn more.

start url does not respond with a 200 when offline 3



No usable web app manifest found on page.

A service worker enables your web app to be reliable in unpredictable network conditions. Learn more.

Installable

Does not use HTTPS

1 insecure request found 🛕 🔨



All sites should be protected with HTTPS, even ones that don't handle sensitive data. HTTPS prevents intruders from tampering with or passively listening in on the communications between your app and your users, and is a prerequisite for HTTP/2 and many new web platform APIs. Learn more.

Insecure URL

...52fe823.../nasa-has-determined-where-the-mysterious-jelly-do...jpg (static2.businessinsider.com)

5 Does not register a service worker that controls page and start_url



The service worker is the technology that enables your app to use many Progressive Web App features, such as offline, add to homescreen, and push notifications. Learn more.

Web app manifest does not meet the installability requirements



Failures: No manifest was fetched.

Browsers can proactively prompt users to add your app to their homescreen, which can lead to higher engagement. Learn more.

PWA Optimized

7 Redirects HTTP traffic to HTTPS



If you've already set up HTTPS, make sure that you redirect all HTTP traffic to HTTPS. Learn more.

8 Is not configured for a custom splash screen



Failures: No manifest was fetched.

A themed splash screen ensures a high-quality experience when users launch your app from their homescreens. Learn more.

9 Does not set an address-bar theme color



Failures: No manifest was fetched, No `<meta name="theme-color"> `tag found.

The browser address bar can be themed to match your site. <u>Learn more</u>.

10 Content is not sized correctly for the viewport



The viewport size is 981px, whereas the window size is 412px.

If the width of your app's content doesn't match the width of the viewport, your app might not be optimized for mobile screens. <u>Learn more</u>.

11 Does not have a <meta name="viewport"> tag with width or initial-scale



No viewport meta tag found

Add a viewport meta tag to optimize your app for mobile screens. Learn more.

12 Contains some content when JavaScript is not available



Your app should display some content when JavaScript is disabled, even if it's just a warning to the user that JavaScript is required to use the app. <u>Learn more</u>.

Additional items to manually check

3 audits ^

These checks are required by the baseline <u>PWA Checklist</u> but are not automatically checked by Lighthouse. They do not affect your score but it's important that you verify them manually.

1 Site works cross-browser

^

To reach the most number of users, sites should work across every major browser. Learn more.

2 Page transitions don't feel like they block on the network

^

Transitions should feel snappy as you tap around, even on a slow network, a key to perceived performance. <u>Learn more</u>.

3 Each page has a URL

^

Ensure individual pages are deep linkable via the URLs and that URLs are unique for the purpose of shareability on social media. Learn more.

Runtime settings

- URL: https://cevaho.github.io/html-semantique/
- Fetch time: Jan 16, 2019, 9:44 AM GMT+1
- **Device**: Emulated Nexus 5X
- Network throttling: 150 ms TCP RTT, 1,638.4 Kbps throughput (Simulated)
- CPU throttling: 4x slowdown (Simulated)
- User agent (host): Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/71.0.3578.98 Safari/537.36
- User agent (network): Mozilla/5.0 (Linux; Android 6.0.1; Nexus 5 Build/MRA58N)
 AppleWebKit/537.36 (KHTML, like Gecko) Chrome/71.0.3559.0 Mobile Safari/537.36
- CPU/Memory Power: 563

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