

Performance



Accessibility



Best Practices



SEO



## Performance

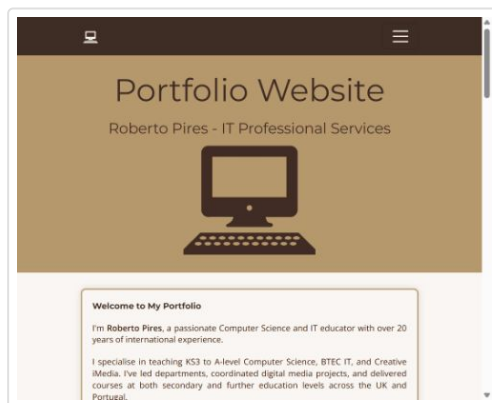
Values are estimated and may vary. The [performance score is calculated](#) directly from these metrics. [See calculator.](#)



0–49

50–89

90–100



### METRICS

Expand view

First Contentful Paint

0.9 s

Largest Contentful Paint

1.0 s

Total Blocking Time

0 ms

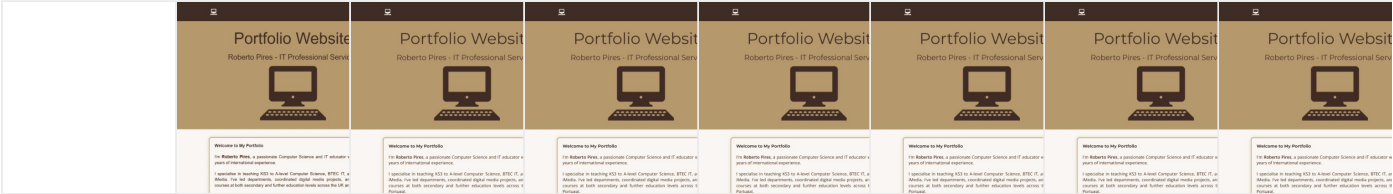
Cumulative Layout Shift

0.004

Speed Index

0.9 s

View Treemap



Later this year, insights will replace performance audits. [Learn more and provide feedback here.](#)

Try insights

Show audits relevant to: All FCP LCP TBT CLS

DIAGNOSTICS

▲ Eliminate render-blocking resources — Est savings of 550 ms



Resources are blocking the first paint of your page. Consider delivering critical JS/CSS inline and deferring all non-critical JS/styles. [Learn how to eliminate render-blocking resources.](#) FCP LCP

URL	Transfer Size	Est Savings
JSDelivr CDN Cdn	27.3 KiB	610 ms
...css/bootstrap.min.css (cdn.jsdelivr.net)	27.3 KiB	610 ms
Google Fonts Cdn	2.2 KiB	310 ms
/css2?family=... (fonts.googleapis.com)	2.2 KiB	310 ms

▲ Reduce unused CSS — Est savings of 23 KiB



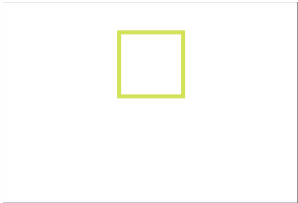
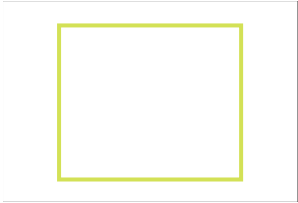
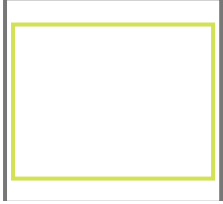
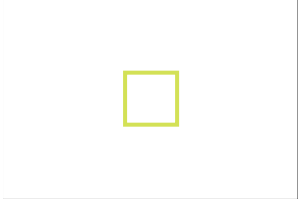
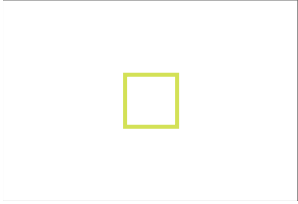

Reduce unused rules from stylesheets and defer CSS not used for above-the-fold content to decrease bytes consumed by network activity. [Learn how to reduce unused CSS.](#) FCP LCP

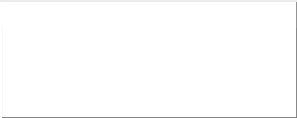
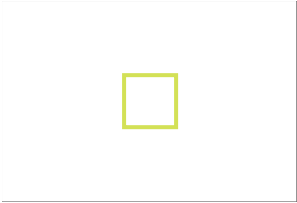
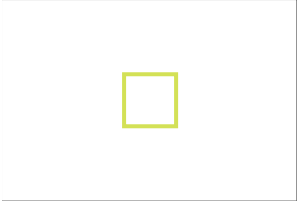
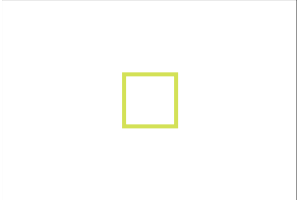
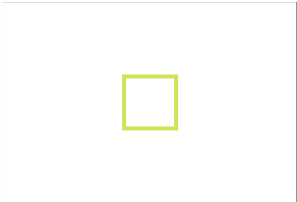
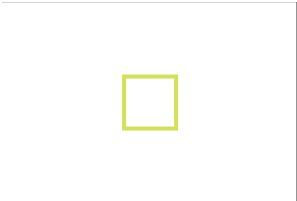
URL	Transfer Size	Est Savings
JSDelivr CDN <span>Cdn</span>	24.6 KiB	23.4 KiB
...css/bootstrap.min.css (cdn.jsdelivr.net)	24.6 KiB	23.4 KiB

Image elements do not have explicit [width](#) and [height](#)



Set an explicit width and height on image elements to reduce layout shifts and improve CLS. [Learn how to set image dimensions](#) CLS

URL		
GitHub <span>Utility</span> <span>1st Party</span>		
	img.logo.logo-navbar	...images/logodbg2.webp (rpires71.github.io)
	img.logo.logo-header.img-fluid	...images/logolbg3.webp (rpires71.github.io)
	img.img-fluid	...images/badgev2.webp (rpires71.github.io)
	img.footer-icon.me-2	...icons/award.svg (rpires71.github.io)
	img.footer-icon.me-2	...icons/map-pin.svg (rpires71.github.io)
	img.footer-icon.me-2	...icons/send.svg (rpires71.github.io)

URL		
		
	img.footer-icon.me-2	...icons/phone.svg (rpires71.github.io)
	img.footer-icon.me-2	...icons/message-circle.svg (rpires71.github.io)
	img.social-icon.me-2	...icons/linkedin.svg (rpires71.github.io)
	img.social-icon.me-2	...icons/facebook.svg (rpires71.github.io)
	img.social-icon	...icons/instagram.svg (rpires71.github.io)

Minify CSS — Est savings of 5 KiB



Minifying CSS files can reduce network payload sizes. [Learn how to minify CSS.](#) FCP LCP

URL	Transfer Size	Est Savings
GitHub <span>Utility</span> <span>1st Party</span>	7.1 KiB	4.7 KiB
...css/style.css (rpires71.github.io)	7.1 KiB	4.7 KiB

Serve static assets with an efficient cache policy — 15 resources found




A long cache lifetime can speed up repeat visits to your page. [Learn more about efficient cache policies.](#)

URL	Cache TTL	Transfer Size
GitHub <span>Utility</span> <span>1st Party</span>		287 KiB
...images/homeCarousel2v3.webp (rpires71.github.io)	10m	100 KiB
...images/homeCarousel3v3.webp (rpires71.github.io)	10m	53 KiB
...images/homeCarousel1v3.webp (rpires71.github.io)	10m	53 KiB
...images/badgev2.webp (rpires71.github.io)	10m	51 KiB
...images/logolbg3.webp (rpires71.github.io)	10m	10 KiB
...images/logodbg2.webp (rpires71.github.io)	10m	9 KiB
...css/style.css (rpires71.github.io)	10m	7 KiB
...icons/facebook.svg (rpires71.github.io)	10m	0 KiB
...icons/award.svg (rpires71.github.io)	10m	0 KiB
...icons/message-circle.svg (rpires71.github.io)	10m	0 KiB
...icons/send.svg (rpires71.github.io)	10m	0 KiB
...icons/phone.svg (rpires71.github.io)	10m	0 KiB
...icons/linkedin.svg (rpires71.github.io)	10m	0 KiB
...icons/map-pin.svg (rpires71.github.io)	10m	0 KiB
...icons/instagram.svg (rpires71.github.io)	10m	0 KiB

Properly size images — Est savings of 29 KiB

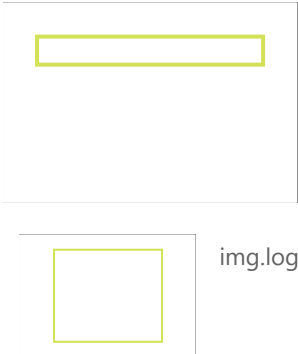
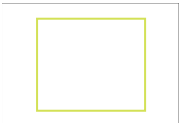


Serve images that are appropriately-sized to save cellular data and improve load time. [Learn how to size images.](#) FCP LCP

URL		Resource Size	Est Savings
GitHub <span>Utility</span> <span>1st Party</span>		71.2 KiB	28.5 KiB
 img.d-block.w-100	... images/homeCarousel1v3.webp (rpires71.github.io)	53.2 KiB	12.1 KiB
	...images/logodbg2.webp (rpires71.github.io)	8.6 KiB	8.6 KiB
	...images/logolbg3.webp (rpires71.github.io)	9.4 KiB	7.9 KiB
img.logo.logo-navbar			
img.logo.logo-header.img-fluid			

Avoid large layout shifts — 1 layout shift found

These are the largest layout shifts observed on the page. Each table item represents a single layout shift, and shows the element that shifted the most. Below each item are possible root causes that led to the layout shift. Some of these layout shifts may not be included in the CLS metric value due to [windowing](#). [Learn how to improve CLS](#) CLS

Element	Layout shift score
 h1.header-title	0.004
 img.logo.logo-header.img-fluid	Media element lacking an explicit size
...v30/JTUSjlg1_...woff2 (fonts.gstatic.com)	Web font loaded

Avoid chaining critical requests — 4 chains found

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 how to avoid chaining critical requests.](#)

Maximum critical path latency: **938.732 ms**

Initial Navigation

- /milestone1/index.html (rpires71.github.io)
  - ...css/bootstrap.min.css (cdn.jsdelivrivr.net) - **344.259 ms**, 27.26 KiB
  - ...css/style.css (rpires71.github.io)
    - /css2?family=... (fonts.googleapis.com)
      - ...v43/memvYaGs1....woff2 (fonts.gstatic.com) - **230.715 ms**, 42.62 KiB
      - ...v30/JTUSjlg1\_....woff2 (fonts.gstatic.com) - **285.122 ms**, 34.77 KiB
  - ...js/bootstrap.bundle.min.js (cdn.jsdelivrivr.net) - **364.392 ms**, 22.43 KiB

Minimize third-party usage — Third-party code blocked the main thread for 0 ms

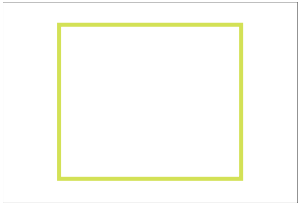
Third-party code can significantly impact load performance. Limit the number of redundant third-party providers and try to load third-party code after your page has primarily finished loading. [Learn how to minimize third-party impact.](#) TBT

Third-Party	Transfer Size	Main-Thread Blocking Time
Google Fonts <span>Cdn</span>	<b>80 KiB</b>	<b>0 ms</b>
...v43/memvYaGs1....woff2 (fonts.gstatic.com)	43 KiB	0 ms
...v30/JTUSjlg1_....woff2 (fonts.gstatic.com)	35 KiB	0 ms
/css2?family=... (fonts.googleapis.com)	2 KiB	0 ms
JSDelivr CDN <span>Cdn</span>	<b>50 KiB</b>	<b>0 ms</b>
...css/bootstrap.min.css (cdn.jsdelivrivr.net)	27 KiB	0 ms
...js/bootstrap.bundle.min.js (cdn.jsdelivrivr.net)	22 KiB	0 ms

Largest Contentful Paint element — 1,040 ms

This is the largest contentful element painted within the viewport. [Learn more about the Largest Contentful Paint element](#) LCP

Element



img.logo.logo-header.img-fluid

Phase	% of LCP	Timing
TTFB	26%	270 ms
Load Delay	14%	140 ms
Load Time	27%	280 ms
Render Delay	33%	350 ms

More information about the performance of your application. These numbers don't [directly affect](#) the Performance score.

PASSED AUDITS (28)

Hide

Defer offscreen images

^

Consider lazy-loading offscreen and hidden images after all critical resources have finished loading to lower time to interactive. [Learn how to defer offscreen images.](#) FCP LCP

Minify JavaScript

^

Minifying JavaScript files can reduce payload sizes and script parse time. [Learn how to minify JavaScript.](#) FCP LCP

Reduce unused JavaScript

^

Reduce unused JavaScript and defer loading scripts until they are required to decrease bytes consumed by network activity. [Learn how to reduce unused JavaScript.](#) FCP LCP

Efficiently encode images

^

Optimized images load faster and consume less cellular data. [Learn how to efficiently encode images.](#) FCP LCP

Serve images in next-gen formats

^

Image formats like WebP and AVIF often provide better compression than PNG or JPEG, which means faster downloads and less data consumption. [Learn more about modern image formats.](#) FCP LCP

Enable text compression

^

Text-based resources should be served with compression (gzip, deflate or brotli) to minimize total network bytes. [Learn more about text compression.](#) FCP LCP

Preconnect to required origins

^



Consider adding preconnect or dns-prefetch resource hints to establish early connections to important third-party origins. [Learn how to preconnect to required origins.](#) LCP FCP

Initial server response time was short — Root document took 210 ms

Keep the server response time for the main document short because all other requests depend on it. [Learn more about the Time to First Byte metric.](#) FCP LCP

URL	Time Spent
GitHub <span>Utility</span> <span>1st Party</span>	<b>210 ms</b>
/milestone1/index.html (rpires71.github.io)	210 ms

Avoid multiple page redirects

Redirects introduce additional delays before the page can be loaded. [Learn how to avoid page redirects.](#) LCP FCP

Use HTTP/2

HTTP/2 offers many benefits over HTTP/1.1, including binary headers and multiplexing. [Learn more about HTTP/2.](#) LCP FCP

Use video formats for animated content

Large GIFs are inefficient for delivering animated content. Consider using MPEG4/WebM videos for animations and PNG/WebP for static images instead of GIF to save network bytes. [Learn more about efficient video formats](#) FCP LCP

Remove duplicate modules in JavaScript bundles

Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network activity. FCP LCP

Avoid serving legacy JavaScript to modern browsers

Polyfills and transforms enable legacy browsers to use new JavaScript features. However, many aren't necessary for modern browsers. Consider modifying your JavaScript build process to not transpile [Baseline](#) features, unless you know you must support legacy browsers. [Learn why most sites can deploy ES6+ code without transpiling](#) FCP LCP

Preload Largest Contentful Paint image

If the LCP element is dynamically added to the page, you should preload the image in order to improve LCP. [Learn more about preloading LCP elements.](#) LCP

Avoids enormous network payloads — Total size was 423 KiB



Large network payloads cost users real money and are highly correlated with long load times. [Learn how to reduce payload sizes.](#)

☒ Show 3rd-party resources (4)


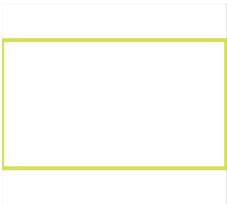
URL	Transfer Size
GitHub <span>Utility</span> <span>1st Party</span>	276.7 KiB
...images/homeCarousel2v3.webp (rpires71.github.io)	100.2 KiB
...images/homeCarousel3v3.webp (rpires71.github.io)	53.5 KiB
...images/homeCarousel1v3.webp (rpires71.github.io)	53.4 KiB
...images/badgev2.webp (rpires71.github.io)	51.2 KiB
...images/logolbg3.webp (rpires71.github.io)	9.6 KiB
...images/logodbg2.webp (rpires71.github.io)	8.8 KiB
Google Fonts <span>Cdn</span>	77.4 KiB
...v43/memvYaGs1....woff2 (fonts.gstatic.com)	42.6 KiB
...v30/JTUSjlg1_....woff2 (fonts.gstatic.com)	34.8 KiB
JSDelivr CDN <span>Cdn</span>	49.7 KiB
...css/bootstrap.min.css (cdn.jsdelivr.net)	27.3 KiB
...js/bootstrap.bundle.min.js (cdn.jsdelivr.net)	22.4 KiB

Avoids an excessive DOM size — 132 elements



A large DOM will increase memory usage, cause longer [style calculations](#), and produce costly [layout reflows](#). [Learn how to avoid an excessive DOM size.](#) TBT

Statistic	Element	Value
Total DOM Elements		132

Statistic	Element	Value
Maximum DOM Depth	 img.d-block.w-100	11
Maximum Child Elements	 div.footer-tile	10

User Timing marks and measures

Consider instrumenting your app with the User Timing API to measure your app's real-world performance during key user experiences. [Learn more about User Timing marks.](#)

JavaScript execution time — 0.0 s

Consider reducing the time spent parsing, compiling, and executing JS. You may find delivering smaller JS payloads helps with this. [Learn how to reduce Javascript execution time.](#) TBT

URL	Total CPU Time	Script Evaluation	Script Parse
Unattributable	92 ms	3 ms	0 ms
Unattributable	92 ms	3 ms	0 ms
GitHub <span>Utility</span> <span>1st Party</span>	89 ms	6 ms	1 ms
/milestone1/index.html (rpires71.github.io)	89 ms	6 ms	1 ms

Minimizes main-thread work — 0.2 s

Consider reducing the time spent parsing, compiling and executing JS. You may find delivering smaller JS payloads helps with this. [Learn how to minimize main-thread work](#) TBT

Category	Time Spent
Other	118 ms

Category	Time Spent
Style & Layout	49 ms
Script Evaluation	12 ms
Rendering	9 ms
Parse HTML & CSS	6 ms
Script Parsing & Compilation	3 ms

All text remains visible during webfont loads



Leverage the `font-display` CSS feature to ensure text is user-visible while webfonts are loading. [Learn more about font-display.](#)

☐ Lazy load third-party resources with facades



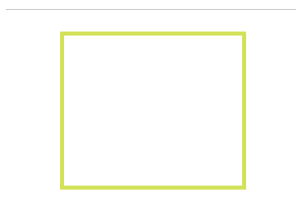
Some third-party embeds can be lazy loaded. Consider replacing them with a facade until they are required. [Learn how to defer third-parties with a facade.](#) TBT

Largest Contentful Paint image was not lazily loaded



Above-the-fold images that are lazily loaded render later in the page lifecycle, which can delay the largest contentful paint. [Learn more about optimal lazy loading.](#) LCP

Element



img.logo.logo-header.img-fluid

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 about adopting passive event listeners.](#)

Avoids `document.write()`



For users on slow connections, external scripts dynamically injected via `document.write()` can delay page load by tens of seconds. [Learn how to avoid document.write\(\).](#)

### ○ Avoid long main-thread tasks



Lists the longest tasks on the main thread, useful for identifying worst contributors to input delay. [Learn how to avoid long main-thread tasks](#) TBT

### ○ Avoid non-composited animations



Animations which are not composited can be janky and increase CLS. [Learn how to avoid non-composited animations](#) CLS

Has a `<meta name="viewport">` tag with `width` or `initial-scale`



A `<meta name="viewport">` not only optimizes your app for mobile screen sizes, but also prevents [a 300 millisecond delay to user input](#). [Learn more about using the viewport meta tag](#).

Page didn't prevent back/forward cache restoration



Many navigations are performed by going back to a previous page, or forwards again. The back/forward cache (bfcache) can speed up these return navigations. [Learn more about the bfcache](#)



## Accessibility

These checks highlight opportunities to [improve the accessibility of your web app](#). Automatic detection can only detect a subset of issues and does not guarantee the accessibility of your web app, so [manual testing](#) is also encouraged.

### ADDITIONAL ITEMS TO MANUALLY CHECK (10)

[Hide](#)

### ○ Interactive controls are keyboard focusable



Custom interactive controls are keyboard focusable and display a focus indicator. [Learn how to make custom controls focusable](#).

### ○ 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. [Learn how to decorate interactive elements with affordance hints](#).

### ○ The page has a logical tab order



Tabbing through the page follows the visual layout. Users cannot focus elements that are offscreen. [Learn more about logical tab ordering](#).

☐ Visual order on the page follows DOM order ^

DOM order matches the visual order, improving navigation for assistive technology. [Learn more about DOM and visual ordering](#).

☐ 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. [Learn how to avoid focus traps](#).

☐ 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 how to direct focus to new content](#).

☐ 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. [Learn more about landmark elements](#).

☐ Offscreen content is hidden from assistive technology ^

Offscreen content is hidden with display: none or aria-hidden=true. [Learn how to properly hide offscreen content](#).

☐ Custom controls have associated labels ^

Custom interactive controls have associated labels, provided by aria-label or aria-labelledby. [Learn more about custom controls and labels](#).

☐ Custom controls have ARIA roles ^

Custom interactive controls have appropriate ARIA roles. [Learn how to add roles to custom controls](#).

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

PASSED AUDITS (20)

Hide

[\[aria-\\*\]](#) attributes match their roles ^

Each ARIA role supports a specific subset of aria-\* attributes. Mismatching these invalidates the aria-\* attributes. [Learn](#)

[how to match ARIA attributes to their roles.](#)

[aria-hidden="true"] is not present on the document <body>



Assistive technologies, like screen readers, work inconsistently when aria-hidden="true" is set on the document <body>. [Learn how aria-hidden affects the document body.](#)

[aria-\*] attributes have valid values



Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid values. [Learn more about valid values for ARIA attributes.](#)

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



Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid names. [Learn more about valid ARIA attributes.](#)

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 how to make buttons more accessible.](#)

Image elements have [alt] attributes



Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with an empty alt attribute. [Learn more about the alt attribute.](#)

[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. [Learn more about the viewport meta tag.](#)

ARIA attributes are used as specified for the element's role



Some ARIA attributes are only allowed on an element under certain conditions. [Learn more about conditional ARIA attributes.](#)

[aria-hidden="true"] elements do not contain focusable descendents



Focusable descendents within an [aria-hidden="true"] element prevent those interactive elements from being available to users of assistive technologies like screen readers. [Learn how aria-hidden affects focusable elements.](#)

Elements use only permitted ARIA attributes



Using ARIA attributes in roles where they are prohibited can mean that important information is not communicated to users of assistive technologies. [Learn more about prohibited ARIA roles.](#)

Background and foreground colors have a sufficient contrast ratio



Low-contrast text is difficult or impossible for many users to read. [Learn how to provide sufficient color contrast.](#)

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 about document titles.](#)

`<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 about the `lang` attribute.](#)

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



Specifying a valid [BCP 47 language](#) helps screen readers announce text properly. [Learn how to use the `lang` attribute.](#)

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. [Learn how to make links accessible.](#)

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. [Learn more about the `tabindex` attribute.](#)

Touch targets have sufficient size and spacing.



Touch targets with sufficient size and spacing help users who may have difficulty targeting small controls to activate the targets. [Learn more about touch targets.](#)

Heading elements appear in a sequentially-descending order



Properly ordered headings that do not skip levels convey the semantic structure of the page, making it easier to navigate and understand when using assistive technologies. [Learn more about heading order.](#)

Skip links are focusable.





Including a skip link can help users skip to the main content to save time. [Learn more about skip links.](#)

Image elements do not have `[alt]` attributes that are redundant text.



Informative elements should aim for short, descriptive alternative text. Alternative text that is exactly the same as the text adjacent to the link or image is potentially confusing for screen reader users, because the text will be read twice. [Learn more about the alt attribute.](#)

## NOT APPLICABLE (37)

Hide

☐ `[accesskey]` values are unique



Access keys let users quickly focus a part of the page. For proper navigation, each access key must be unique. [Learn more about access keys.](#)

☐ Uses ARIA roles only on compatible elements



Many HTML elements can only be assigned certain ARIA roles. Using ARIA roles where they are not allowed can interfere with the accessibility of the web page. [Learn more about ARIA roles.](#)

☐ `button`, `link`, and `menuitem` elements have accessible names



When an element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn how to make command elements more accessible.](#)

☐ Deprecated ARIA roles were not used



Deprecated ARIA roles may not be processed correctly by assistive technology. [Learn more about deprecated ARIA roles.](#)

☐ Elements with `role="dialog"` or `role="alertdialog"` have accessible names.



ARIA dialog elements without accessible names may prevent screen readers users from discerning the purpose of these elements. [Learn how to make ARIA dialog elements more accessible.](#)

☐ ARIA input fields have accessible names



When an input field doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn more about input field labels.](#)

☐ ARIA `meter` elements have accessible names



When a meter element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn how to name meter elements.](#)

☐ ARIA `progressbar` elements have accessible names



When a `progressbar` element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn how to label progressbar elements.](#)

☐ `[role]`s have all required `[aria-*) attributes`



Some ARIA roles have required attributes that describe the state of the element to screen readers. [Learn more about roles and required attributes.](#)

☐ Elements with an ARIA `[role]` that require children to contain a specific `[role]` have all required children.



Some ARIA parent roles must contain specific child roles to perform their intended accessibility functions. [Learn more about roles and required children elements.](#)

☐ `[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. [Learn more about ARIA roles and required parent element.](#)

☐ `[role]` values are valid



ARIA roles must have valid values in order to perform their intended accessibility functions. [Learn more about valid ARIA roles.](#)

☐ Elements with the `role=text` attribute do not have focusable descendents.



Adding `role=text` around a text node split by markup enables VoiceOver to treat it as one phrase, but the element's focusable descendents will not be announced. [Learn more about the `role=text` attribute.](#)

☐ ARIA toggle fields have accessible names



When a toggle field doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn more about toggle fields.](#)

☐ ARIA `tooltip` elements have accessible names



When a tooltip element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn how to name tooltip elements.](#)

☐ ARIA `treeitem` elements have accessible names



When a `treeitem` element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn more about labeling treeitem elements.](#)

- ☐ The page contains a heading, skip link, or landmark region



Adding ways to bypass repetitive content lets keyboard users navigate the page more efficiently. [Learn more about bypass blocks.](#)

- ☐ `<d1>`'s contain only properly-ordered `<dt>` and `<dd>` groups, `<script>`, `<template>` or `<div>` elements.



When definition lists are not properly marked up, screen readers may produce confusing or inaccurate output. [Learn how to structure definition lists correctly.](#)

- ☐ Definition list items are wrapped in `<d1>` elements



Definition list items (`<dt>` and `<dd>`) must be wrapped in a parent `<d1>` element to ensure that screen readers can properly announce them. [Learn how to structure definition lists correctly.](#)

- ☐ ARIA IDs are unique



The value of an ARIA ID must be unique to prevent other instances from being overlooked by assistive technologies. [Learn how to fix duplicate ARIA IDs.](#)

- ☐ No form fields have multiple labels



Form fields with multiple labels can be confusingly announced by assistive technologies like screen readers which use either the first, the last, or all of the labels. [Learn how to use form labels.](#)

- ☐ `<frame>` or `<iframe>` elements have a title



Screen reader users rely on frame titles to describe the contents of frames. [Learn more about frame titles.](#)

- ☐ `<html>` element has an `[xml:lang]` attribute with the same base language as the `[lang]` attribute.



If the webpage does not specify a consistent language, then the screen reader might not announce the page's text correctly. [Learn more about the lang attribute.](#)

- ☐ Input buttons have discernible text.



Adding discernable and accessible text to input buttons may help screen reader users understand the purpose of the input button. [Learn more about input buttons.](#)

- ☐ `<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. [Learn about input image alt text.](#)

## ○ Form elements have associated labels

Labels ensure that form controls are announced properly by assistive technologies, like screen readers. [Learn more about form element labels.](#)

## ○ Links are distinguishable without relying on color.

Low-contrast text is difficult or impossible for many users to read. Link text that is discernible improves the experience for users with low vision. [Learn how to make links distinguishable.](#)

## ○ Lists contain only `<li>` 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 about proper list structure.](#)

## ○ List items (`<li>`) are contained within `<ul>`, `<ol>` or `<menu>` parent elements

Screen readers require list items (`<li>`) to be contained within a parent `<ul>`, `<ol>` or `<menu>` to be announced properly. [Learn more about proper list structure.](#)

## ○ 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. [Learn more about the refresh meta tag.](#)

## ○ `<object>` elements have alternate text

Screen readers cannot translate non-text content. Adding alternate text to `<object>` elements helps screen readers convey meaning to users. [Learn more about alt text for object elements.](#)

## ○ Select elements have associated label elements.

Form elements without effective labels can create frustrating experiences for screen reader users. [Learn more about the select element.](#)

## ○ Tables have different content in the summary attribute and `<caption>`.

The summary attribute should describe the table structure, while `<caption>` should have the onscreen title. Accurate table mark-up helps users of screen readers. [Learn more about summary and caption.](#)

## ○ Cells in a `<table>` element that use the `[headers]` attribute refer to table cells within the same table.

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

[attribute.](#)

- ☐ `<th>` 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. [Learn more about table headers.](#)

- ☐ `[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 how to use the `lang` attribute.](#)

- ☐ `<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 about video captions.](#)



## Best Practices

### TRUST AND SAFETY

- ☐ Ensure CSP is effective against XSS attacks ^

A strong Content Security Policy (CSP) significantly reduces the risk of cross-site scripting (XSS) attacks. [Learn how to use a CSP to prevent XSS](#)

Description	Directive	Severity
No CSP found in enforcement mode		High

- ☐ Use a strong HSTS policy ^

Deployment of the HSTS header significantly reduces the risk of downgrading HTTP connections and eavesdropping attacks. A rollout in stages, starting with a low max-age is recommended. [Learn more about using a strong HSTS policy.](#)

Description	Directive	Severity
No HSTS header found		High

○ Ensure proper origin isolation with COOP

The Cross-Origin-Opener-Policy (COOP) can be used to isolate the top-level window from other documents such as pop-ups. [Learn more about deploying the COOP header.](#)

Description	Directive	Severity
No COOP header found		High

○ Mitigate clickjacking with XFO or CSP

The X-Frame-Options (XFO) header or the frame-ancestors directive in the Content-Security-Policy (CSP) header control where a page can be embedded. These can mitigate clickjacking attacks by blocking some or all sites from embedding the page. [Learn more about mitigating clickjacking.](#)

Description	Severity
No frame control policy found	High

PASSED AUDITS (14)

Hide

Uses HTTPS

All sites should be protected with HTTPS, even ones that don't handle sensitive data. This includes avoiding [mixed content](#), where some resources are loaded over HTTP despite the initial request being served over HTTPS. 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 about HTTPS.](#)

Avoids deprecated APIs

Deprecated APIs will eventually be removed from the browser. [Learn more about deprecated APIs.](#)

Avoids third-party cookies

Third-party cookies may be blocked in some contexts. [Learn more about preparing for third-party cookie restrictions.](#)

Allows users to paste into input fields

Preventing input pasting is a bad practice for the UX, and weakens security by blocking password managers. [Learn more about user-friendly input fields.](#)

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 a user action instead. [Learn more about the geolocation permission.](#)

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 about responsibly getting permission for notifications.](#)

Displays images with correct aspect ratio



Image display dimensions should match natural aspect ratio. [Learn more about image aspect ratio.](#)

Serves images with appropriate resolution



Image natural dimensions should be proportional to the display size and the pixel ratio to maximize image clarity. [Learn how to provide responsive images.](#)

Has a `<meta name="viewport">` tag with `width` or `initial-scale`



A `<meta name="viewport">` not only optimizes your app for mobile screen sizes, but also prevents [a 300 millisecond delay to user input](#). [Learn more about using the viewport meta tag.](#)

Page has the HTML doctype



Specifying a doctype prevents the browser from switching to quirks-mode. [Learn more about the doctype declaration.](#)

Properly defines charset



A character encoding declaration is required. It can be done with a `<meta>` tag in the first 1024 bytes of the HTML or in the Content-Type HTTP response header. [Learn more about declaring the character encoding.](#)

No browser errors logged to the console



Errors logged to the console indicate unresolved problems. They can come from network request failures and other browser concerns. [Learn more about this errors in console diagnostic audit](#)

No issues in the **Issues** panel in Chrome Devtools



Issues logged to the Issues panel in Chrome Devtools indicate unresolved problems. They can come from network request failures, insufficient security controls, and other browser concerns. Open up the Issues panel in Chrome DevTools for more

details on each issue.

Page has valid source maps



Source maps translate minified code to the original source code. This helps developers debug in production. In addition, Lighthouse is able to provide further insights. Consider deploying source maps to take advantage of these benefits. [Learn more about source maps.](#)

URL	Map URL
JSDelivr CDN <span>Cdn</span>	
...js/bootstrap.bundle.min.js (cdn.jsdelivr.net)	...js/bootstrap.bundle.min.js.map (cdn.jsdelivr.net)

NOT APPLICABLE (3)

Hide

○ Redirects HTTP traffic to HTTPS



Make sure that you redirect all HTTP traffic to HTTPS in order to enable secure web features for all your users. [Learn more.](#)

○ Document uses legible font sizes



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. [Learn more about legible font sizes.](#)

○ Detected JavaScript libraries



All front-end JavaScript libraries detected on the page. [Learn more about this JavaScript library detection diagnostic audit.](#)



SEO

These checks ensure that your page is following basic search engine optimization advice. There are many additional factors Lighthouse does not score here that may affect your search ranking, including performance on [Core Web Vitals](#). [Learn more about Google Search Essentials.](#)

ADDITIONAL ITEMS TO MANUALLY CHECK (1)

Hide



○ Structured data is valid



Run the [Structured Data Testing Tool](#) and the [Structured Data Linter](#) to validate structured data. [Learn more about Structured Data.](#)

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

## PASSED AUDITS (8)

Hide

Page isn't blocked from indexing



Search engines are unable to include your pages in search results if they don't have permission to crawl them. [Learn more about crawler directives.](#)

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 about document titles.](#)

Document has a meta description



Meta descriptions may be included in search results to concisely summarize page content. [Learn more about the meta description.](#)

Page has successful HTTP status code



Pages with unsuccessful HTTP status codes may not be indexed properly. [Learn more about HTTP status codes.](#)

Links have descriptive text



Descriptive link text helps search engines understand your content. [Learn how to make links more accessible.](#)

Links are crawlable



Search engines may use href attributes on links to crawl websites. Ensure that the href attribute of anchor elements links to an appropriate destination, so more pages of the site can be discovered. [Learn how to make links crawlable](#)

Image elements have `[alt]` attributes



Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with an empty alt attribute. [Learn more about the alt attribute.](#)

Document has a valid `hreflang`



hreflang links tell search engines what version of a page they should list in search results for a given language or region. [Learn more about hreflang.](#)

NOT APPLICABLE (2)

Hide

☐ robots.txt is valid

^

If your robots.txt file is malformed, crawlers may not be able to understand how you want your website to be crawled or indexed. [Learn more about robots.txt.](#)

☐ Document has a valid `rel=canonical`

^

Canonical links suggest which URL to show in search results. [Learn more about canonical links.](#)

Captured at Aug 19, 2025, 8:03 PM GMT	Emulated Desktop with Lighthouse 12.6.1	Single page session
Initial page load	Custom throttling	Using Chromium 139.0.0.0 with devtools