# Rapport d'intervention

# NINA CARDUCCI

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## I - Score Lighthouse

## 1 - Score Lighthouse avant optimisation



## 2 - Score Lighthouse après optimisation



# II - Détails des optimisations et interventions effectuées

## 1 - Les images

Le projet comporte originellement 15 images pour un poids total de **29,4 Mo**. Nous avons effectué les modifications suivantes aux images :

- La taille des images a été réduite à maximum 1980px de large pour les images en pleine largeur et maximum 1200px pour le reste
- Nous avons créé des formats alternatifs pour chaque image afin de mieux s'adapter aux différents formats d'écrans selon les suggestions de ResplmageLint
- Toutes les images ont été converties au format WEBP et mieux compressées

Après les modifications, le poids total des images est de **0,65 Mo** au format mobile, format de référence pour les outils de mesure des performances, soit un gain de **97,79** %.

## 2 – Le Javascript

Le chargement des scripts non-essentiels au chargement initial de la page a été retardé pour accélérer le temps de premier rendement.

### 3 – Le CSS et Bootstrap

Le projet utilise originellement un fichier style.css sur mesure ainsi que la librairie bootstrap.css pour un poids total de **216,5 Ko** dont une grande partie n'était pas utilisée. Nous avons effectué les modifications suivantes :

- Le site n'utilise plus bootstrap.css et les styles utiles ont été ajoutés au fichier style.css du site.
- Les fichiers de styles sont minifiés.

Après les modifications, le poids total des fichiers de style chargé est de 15,5 Ko, soit un gain de 92,84%.

# 4 – Ajout des données de référencement local

Les données suivantes ont été ajoutés au site pour renforcer le référencement local :

- Nom de l'entreprise : Nina Carducci Photographe
- **Description**: Photographe professionnel proposant des services de portraits, mariages, affaires et concerts.
- Adresse :

o Rue: 68 avenue Alsace-Lorraine

o Ville: Bordeaux

o Code postal: 33200

o Région : Nouvelle-Aquitaine

o Pays: France

• **Téléphone** : 05 56 67 78 89

• **Site Web**: Lien vers le site internet

Réseaux sociaux :

o Lien vers le compte Instagram

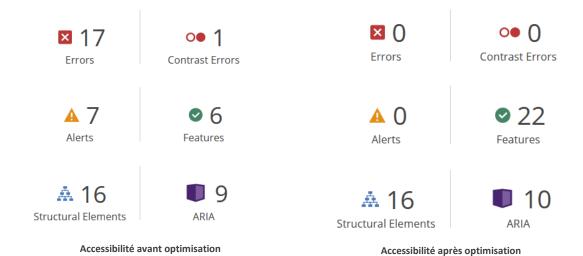
Horaires d'ouverture : Du lundi au dimanche, de 10h00 à 19h00

• Fourchette de prix : €€

Voici un lien vers le rapport complet de résultats enrichis Rich Snippet

## III - Accessibilité du site

#### 1 – Audits WAVF



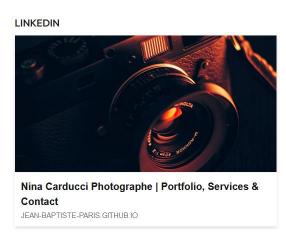
2 – Modifications effectuées

- Révision de la structure des titres
- Vérification des rôles des éléments html et des régions de page
- Ajouts de textes alternatifs aux images
- Ajustement des contrastes des filtres pour la lisibilité
- Association des champs du formulaire à leur label respectif
- Réorganisation et ajustement de la navigation au clavier

## 3 - Metas pour les réseaux sociaux

Les captures d'écran d'Open Graphs ci-dessous illustrent la manière dont le site se présente lorsqu'il est partagé sur les réseaux sociaux tels que Facebook, Twitter et LinkedIn. Ces affichages jouent un rôle essentiel dans l'engagement des utilisateurs et l'amélioration de la visibilité de votre contenu.





# IV - Détails de réalisations additionnelles à la demande du client

## 1 – Correction de la navigation dans la modale de la galerie

Le morceau de code suivant contenait la source du problème et a été corrigé. Les flèches de navigation permettent maintenant d'afficher les photos souhaitées.

```
let index = 0,
    next = null;

$(imagesCollection).each(function(i) {
    if ($(activeImage).attr("src") === $(this).attr("src")) {
        index = i;
    }
});

next = imagesCollection[index + 1] || imagesCollection[0];
$(".lightboxImage").attr("src", $(next).attr("src"));
},
createLightBox(gallery, lightboxId, navigation) {
    gallery.append(`<div class="modal fade" id="${
        lightboxId ? lightboxId : "galleryLightbox"
    }" tabindex="-1" role="dialog" aria-hidden="true">
        <div class="modal-dialog" role="document">
```

## 2 – Correction de l'affichage des filtres de la galerie

```
filterByTag() {
    if ($(this).hasClass("active-tag")) {
        return;
    }
    $(".active-tag").removeClass("active active-tag");
    $(this).addClass("active active-tag");
    var tag = $(this).data("images-toggle");
```

Le problème se trouvait dans le fonctionnement de la fonction filterByTag qui n'appliquait pas la class 'active' permettant de sélectionner les éléments auxquels appliquer les styles.

## V - Cahier de recette

Détail des fonctionnalités débuggées et de leur statut :

ID	Action	Résultat initial	Résultat attendu	Statut	Remarques et commen- taires
1	Clic sur les flèches de na- vigation de la lightbox de la galerie	Aucun évènement	La lightbox affiche la photo suivante ou précédente de la galerie	Résolu	Le clic était bien écouté mais l'index de l'image vers laquelle naviguer était mal calculé
2	Clic sur les filtres de la galerie	Les travaux de la galerie sont filtrés	Les travaux de la galerie sont filtrés et une couleur de fond est ajoutée au filtre sélectionné	Résolu	Les styles étaient correcte- ment implémentés mais la classe correspondante n'était pas passée au filtre actif au moment du clic

# Annexe

Rapport complet de l'audit Lighthouse



http://localhost:63342/Jean-Baptiste-Paris.github.io/index.html?\_ijt=v17pf1t147ul8v1bflc9ak62di8\_ij\_reload=RELOAD\_...











Performance

Accessibility

Best Practices SEO

PWA

#### There were issues affecting this run of Lighthouse:

 Chrome extensions negatively affected this page's load performance. Try auditing the page in incognito mode or from a Chrome profile without extensions.



## Performance

Values are estimated and may vary. The <u>performance score</u> <u>is calculated</u> directly from these metrics. <u>See calculator</u>.

 $\blacksquare$ 

0-49

50-89

90-100



METRICS Expand view

First Contentful Paint

1.6 s

**Total Blocking Time** 

0 ms

Speed Index

1.6 s

View Treemap

Largest Contentful Paint

2.5 s

Cumulative Layout Shift

0.147

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#### about:blank







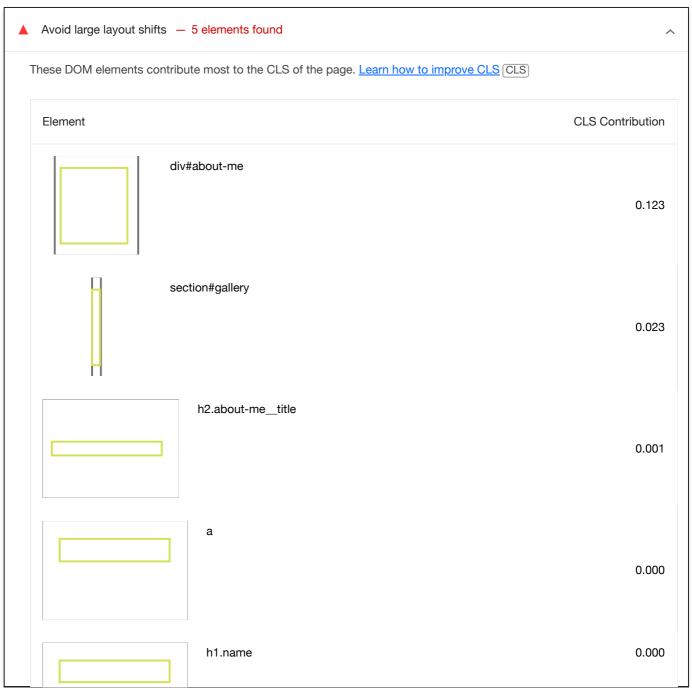






Show audits relevant to: All FCP LCP TBT CLS

#### DIAGNOSTICS



Element CLS Contribution

▲ Eliminate render-blocking resources — Potential savings of 650 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

✓ Show 3rd-party resources (1)

URL	Transfer Size	Potential Savings
localhost 1st Party	13.9 KiB	450 ms
/assets/style.min.css (localhost)	13.9 KiB	450 ms
Google Fonts Cdn	1.2 KiB	810 ms
/css2?family= (fonts.googleapis.com)	1.2 KiB	810 ms

#### ▲ Enable text compression — Potential savings of 98 KiB

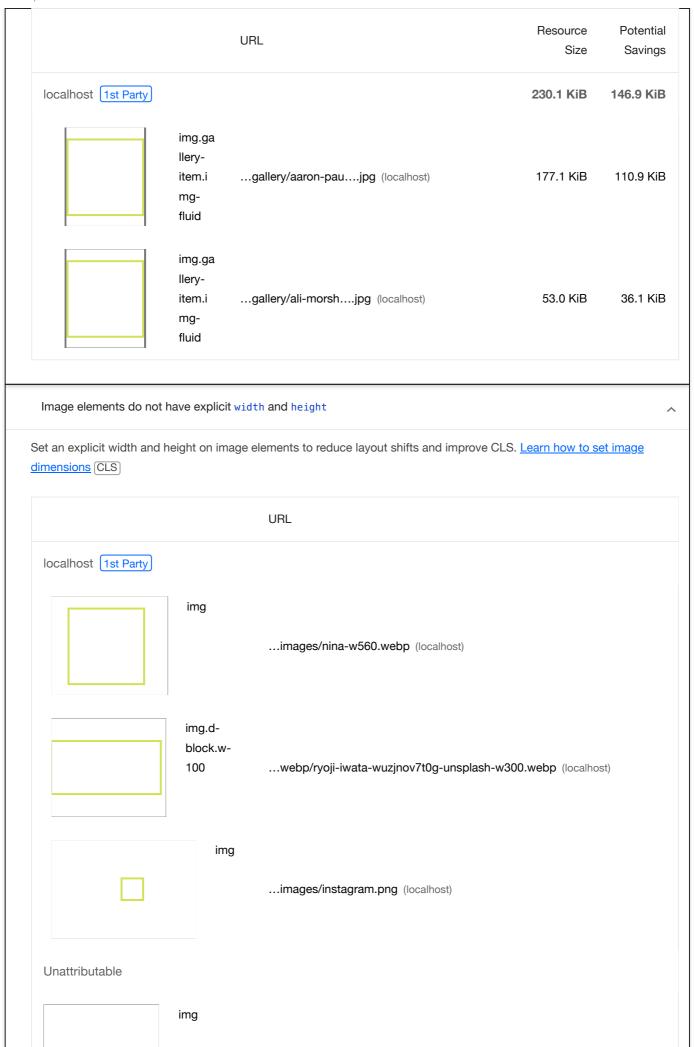
Text-based resources should be served with compression (gzip, deflate or brotli) to minimize total network bytes. <u>Learn more about text compression</u>. FCP LCP

URL	Transfer Size	Potential Savings
localhost 1st Party	135.0 KiB	98.2 KiB
bootstrap/bootstrap.bundle.min.js (localhost)	76.3 KiB	53.8 KiB
/Jean-Baptgithub.io/index.html?_ijt= (localhost)	19.1 KiB	14.0 KiB
/assets/style.css (localhost)	17.6 KiB	13.8 KiB
/assets/style.min.css (localhost)	13.6 KiB	10.1 KiB
/assets/maugallery.js (localhost)	8.4 KiB	6.5 KiB

▲ Largest Contentful Paint image was 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 Reduce unused JavaScript — Potential savings of 157 KiB Reduce unused JavaScript and defer loading scripts until they are required to decrease bytes consumed by network activity. Learn how to reduce unused JavaScript. [LCP] Show 3rd-party resources (1) Transfer Potential URL Size Savings Onepilot Cockpit | Chrome Extension 100.1 KiB 96.5 KiB chrome-extension://lcccolihhkcfjenmihhaanodehemdman/Components.e0526457.js 100.1 KiB 96.5 KiB localhost 1st Party 76.6 KiB 60.9 KiB ...bootstrap/bootstrap.bundle.min.js (localhost) 76.6 KiB 60.9 KiB Minify JavaScript - Potential savings of 3 KiB Minifying JavaScript files can reduce payload sizes and script parse time. Learn how to minify JavaScript. FCP [CCP] Transfer Potential URL Size Savings localhost 1st Party 8.7 KiB 2.5 KiB /assets/maugallery.js (localhost) 8.7 KiB 2.5 KiB Serve images in next-gen formats — Potential savings of 147 KiB 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.

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URL

Efficiently encode images — Potential savings of 53 KiB

Optimized images load faster and consume less cellular data. Learn how to efficiently encode images.

	URL	Resource Size	Potential Savings
localhost 1st Party		230.1 KiB	52.6 KiB
img.ga Ilery- item.i mg- fluid	gallery/aaron-paujpg (localhost)	177.1 KiB	42.4 KiB
img.ga Ilery- item.i mg- fluid	gallery/ali-morshjpg (localhost)	53.0 KiB	10.2 KiB

Page prevented back/forward cache restoration — 1 failure reason

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. <u>Learn more about the bfcache</u>

Failure reason

Failure type

Pages with WebSocket cannot enter back/forward cache.

Pending browser support

/Jean-Bapt....github.io/index.html?\_ijt=... (localhost)

○ User Timing marks and measures — 1 user timing

Consider instrumenting your app with the User Timing API to measure your app's real-world performance during key user experiences. <u>Learn more about User Timing marks</u>.

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v3	Mark	0.00 ms	
Initial server respon	nse time was short — Root document too	ok 0 ms	
Keep the server respo Time to First Byte me	onse time for the main document short be tric. FCP LCP	cause all other requests depend on it.	Learn more abou
URL			Time Spe
localhost 1st Part	у		<b>0</b> n
/Jean-Baptgith	nub.io/index.html?_ijt= (localhost)		0 r
Avoids enormous n	etwork payloads — Total size was 521 K	(iB	
	ds cost users real money and are highly c	correlated with long load times. Learn h	now to reduce pay
DITOR ICD			
Sizes. [LOP]		Observed.	2l
sizes. [CP]		✓ Show 3	
URL		✓ Show 3	Trans
	у	✓ Show 3	Trans Si
URL localhost 1st Part	aujpg (localhost)	✓ Show S	Transi Si 387.8 K
URL localhost 1st Part	_	✓ Show S	Trans: Si <b>387.8 K</b> 177.4 K
URL localhost 1st Part	aujpg (localhost)	Show 3	Trans: Si <b>387.8 K</b> 177.4 K 76.6 K
URL localhost 1st Partgallery/aaron-pabootstrap/bootsgallery/ali-mors	aujpg (localhost) strap.bundle.min.js (localhost)	✓ Show S	Transi Si <b>387.8 K</b> 177.4 K 76.6 K
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URL  localhost 1st Partgallery/aaron-partbootstrap/bootsgallery/ali-morsimages/nina-ws	aujpg (localhost) strap.bundle.min.js (localhost) shjpg (localhost) 560.webp (localhost) nub.io/index.html?_ijt= (localhost)	▼ Show 3	Transi Si 387.8 K 177.4 K 76.6 K 53.3 K 43.1 K 19.4 K
URL  localhost 1st Partgallery/aaron-pabootstrap/bootsgallery/ali-morsimages/nina-ws /Jean-Baptgith /assets/style.css Google Fonts Cd	aujpg (localhost) strap.bundle.min.js (localhost) shjpg (localhost) 560.webp (localhost) nub.io/index.html?_ijt= (localhost)	✓ Show 3	Transi Si 387.8 K 177.4 K 76.6 K 53.3 K 43.1 K 19.4 K 17.9 K 51.5 K

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URL			Transfe Siz
v13/rnCu-xNNwwoff2 (fonts.gstati	c.com)		15.0 Kil
jQuery CDN Cdn			30.2 Kil
/jquery-3.4.1.min.js (code.jquery.com)			30.2 Kil
Avoids an excessive DOM size — 139 e	elements		
A large DOM will increase memory usage, avoid an excessive DOM size. TBT	cause longer <u>style calculations</u> ,	, and produce costly <u>layout reflo</u>	ws. Learn how
Statistic	Element		Valu
Total DOM Elements			13
Maximum DOM Depth	div.mg-prev		1
Maximum Child Elements		div.gallery-items- row.row	
Avoid chaining critical requests — 5 ch	ains found		
The Critical Request Chains below show your chains, reducing the download size of record.  Learn how to avoid chaining critical records.	esources, or deferring the down		
Maximum critical path latency: 119.203 ms	3		
Initial Navigation			
/Jean-Baptgithub.io/index.html			
/assets/style.min.css (localhos	st) - <b>4.731 ms, 13.89 KiB</b>		
/occordamily /fanta goodles			
/css2?family= (fonts.googlea			
v13/UcCO3FwrKwo	ff2 (fonts.gstatic.com) - 31.991 n		
v13/UcCO3FwrKwo	ff2 (fonts.gstatic.com) - 31.991 n ff2 (fonts.gstatic.com) - 20.685 m	ns, 14.99 KiB	
v13/UcCO3FwrKwo v13/rnCu-xNNwwof v13/rnCu-xNNwwof	ff2 (fonts.gstatic.com) - 31.991 n ff2 (fonts.gstatic.com) - 20.685 m ff2 (fonts.gstatic.com) - 39.901 m	ns, 14.99 KiB ns, 15.38 KiB	
v13/UcCO3FwrKwo v13/rnCu-xNNwwof v13/rnCu-xNNwwof	ff2 (fonts.gstatic.com) - 31.991 n ff2 (fonts.gstatic.com) - 20.685 m	ns, 14.99 KiB ns, 15.38 KiB	
v13/UcCO3FwrKwo v13/rnCu-xNNwwof v13/rnCu-xNNwwof	ff2 (fonts.gstatic.com) - 31.991 n ff2 (fonts.gstatic.com) - 20.685 m ff2 (fonts.gstatic.com) - 39.901 m	ns, 14.99 KiB ns, 15.38 KiB	

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

✓ Show 3rd-party resources (2)

URL	Total CPU Time	Script Evaluation	Script Parse
Onepilot Cockpit Chrome Extension	649 ms	360 ms	269 ms
<pre>chrome- extension://lcccolihhkcfjenmihhaanodehemdman/store.2d8387b 2.js</pre>	649 ms	360 ms	269 ms
localhost 1st Party	185 ms	20 ms	33 ms
/Jean-Baptgithub.io/index.html?_ijt= (localhost)	185 ms	20 ms	33 ms
jQuery CDN Cdn	104 ms	49 ms	4 ms
/jquery-3.4.1.min.js (code.jquery.com)	104 ms	49 ms	4 ms
Unattributable	93 ms	10 ms	0 ms
Unattributable	93 ms	10 ms	0 ms

#### ○ Minimizes main-thread work - 1.1 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
Script Evaluation	487 ms
Script Parsing & Compilation	346 ms
Other	180 ms
Style & Layout	69 ms
Parse HTML & CSS	24 ms
Rendering	19 ms
Garbage Collection	6 ms

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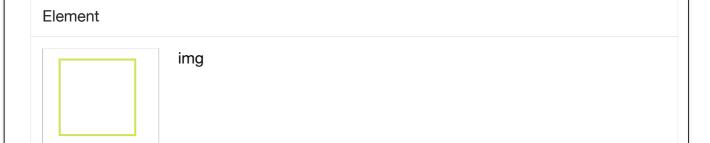
Minimize third-party usage — Third-party code blocked the main thread for 0 ms

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. <u>Learn how to minimize third-party impact</u>. (TBT)

Third-Party	Transfer Size	Main-Thread Blocking Time
Onepilot Cockpit Chrome Extension	100 KiB	0 ms
<pre>chrome- extension://lcccolihhkcfjenmihhaanodehemdman/Components.e052645 7.js</pre>	100 KiB	0 ms
Google Fonts Cdn	66 KiB	0 ms
v13/UcCO3FwrKwoff2 (fonts.gstatic.com)	21 KiB	0 ms
v13/rnCu-xNNwwoff2 (fonts.gstatic.com)	15 KiB	0 ms
v13/rnCu-xNNwwoff2 (fonts.gstatic.com)	15 KiB	0 ms
v13/rnCr-xNNwwoff2 (fonts.gstatic.com)	14 KiB	0 ms
jQuery CDN Cdn	30 KiB	0 ms
/jquery-3.4.1.min.js (code.jquery.com)	30 KiB	0 ms

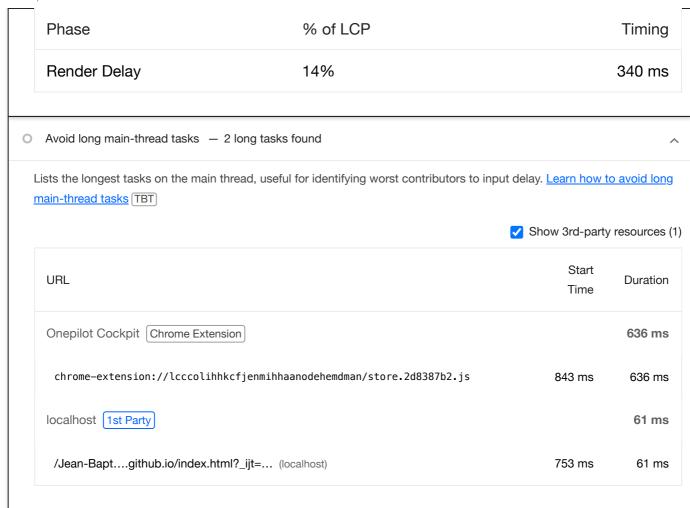
○ Largest Contentful Paint element — 2,500 ms

This is the largest contentful element painted within the viewport. <u>Learn more about the Largest Contentful Paint element</u> [LCP]



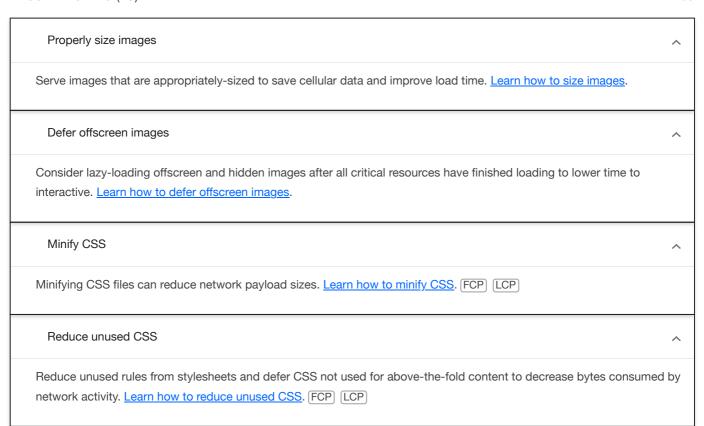
Phase	% of LCP	Timing
TTFB	18%	450 ms
Load Delay	64%	1,590 ms
Load Time	5%	120 ms

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More information about the performance of your application. These numbers don't directly affect the Performance score.

PASSED AUDITS (19)



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Preconnect to required origins	^
Consider adding preconnect or dns-prefetch resource hints to establish early connections to important third-origins. Learn how to preconnect to required origins. FCP LCP	party
Avoid multiple page redirects	^
Redirects introduce additional delays before the page can be loaded. Learn how to avoid page redirects. FCP LC	P
O Preload key requests	^
Consider using <link rel="preload"/> to prioritize fetching resources that are currently requested later in page to Learn how to preload key requests. FCP LCP	ad.
Use HTTP/2	^
HTTP/2 offers many benefits over HTTP/1.1, including binary headers and multiplexing. Learn more about HTTP/2.	
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 [LCP]	d
Remove duplicate modules in JavaScript bundles	
Terrove duplicate modules in davaceript buridies	^
Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network act	
Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network act	
Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network act	tivity.
Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network act  TBT  Avoid serving legacy JavaScript to modern browsers  Polyfills and transforms enable legacy browsers to use new JavaScript features. However, many aren't necessary from modern browsers. For your bundled JavaScript, adopt a modern script deployment strategy using module/nomodule feature detection to reduce the amount of code shipped to modern browsers, while retaining support for legacy browsers.	tivity.
Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network act TBT  Avoid serving legacy JavaScript to modern browsers  Polyfills and transforms enable legacy browsers to use new JavaScript features. However, many aren't necessary from modern browsers. For your bundled JavaScript, adopt a modern script deployment strategy using module/nomodule feature detection to reduce the amount of code shipped to modern browsers, while retaining support for legacy browsers how to use modern JavaScript TBT	or ule owsers.
Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network act TBT  Avoid serving legacy JavaScript to modern browsers  Polyfills and transforms enable legacy browsers to use new JavaScript features. However, many aren't necessary fill modern browsers. For your bundled JavaScript, adopt a modern script deployment strategy using module/nomodule feature detection to reduce the amount of code shipped to modern browsers, while retaining support for legacy browsers how to use modern JavaScript TBT  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	or ule owsers.
Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network act (TBT)  Avoid serving legacy JavaScript to modern browsers  Polyfills and transforms enable legacy browsers to use new JavaScript features. However, many aren't necessary from modern browsers. For your bundled JavaScript, adopt a modern script deployment strategy using module/nomode feature detection to reduce the amount of code shipped to modern browsers, while retaining support for legacy browsers how to use modern JavaScript (TBT)  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 about preloading LCP elements. LCP	or ule owsers.
Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network act TBT  Avoid serving legacy JavaScript to modern browsers  Polyfills and transforms enable legacy browsers to use new JavaScript features. However, many aren't necessary from modern browsers. For your bundled JavaScript, adopt a modern script deployment strategy using module/nomodule feature detection to reduce the amount of code shipped to modern browsers, while retaining support for legacy browsers how to use modern JavaScript (TBT)  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 about preloading LCP elements. LCP  Uses efficient cache policy on static assets — 0 resources found	or ule owsers.

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Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading. Learn more about font-display. FCP LCP

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

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 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. [TBT]



## 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.

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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. <u>Learn more about DOM and visual ordering</u> .	
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.	<u>N</u>
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.</nav></main>	
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. <u>Learn more about custom</u> <u>controls and labels</u> .	
O Custom controls have ARIA roles	^
Custom interactive controls have appropriate ARIA roles. <u>Learn how to add roles to custom controls</u> .	

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

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PASSED AUDITS (20)

[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></body>
Assistive technologies, like screen readers, work inconsistently when aria-hidden="true" is set on the document <body>. <a href="Learn how aria-hidden"><u>Learn how aria-hidden affects the document body</u>.</a></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.
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.
[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-hidden="true"] elements do not contain focusable descendents

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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. 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. 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 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. 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 about proper list structure. List items () are contained within , or <menu> parent elements Screen readers require list items () to be contained within a parent , or <menu> to be announced properly. Learn more about proper list structure. 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.

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Values assigned to role="" are valid ARIA roles.

ARIA roles enable assistive technologies to know the role of each element on the web page. If the role values are misspelled, not existing ARIA role values, or abstract roles, then the purpose of the element will not be communicated to users of assistive technologies. <u>Learn more about ARIA roles</u>.

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. <u>Learn more about the alt attribute</u>.

NOT APPLICABLE (41)

[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</u> more about access keys.

O 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. <u>Learn how to make command elements more accessible</u>.

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. <u>Learn how to make ARIA dialog elements more accessible</u>.

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. <u>Learn more about input field labels</u>.

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. <u>Learn how to name meter elements</u>.

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. <u>Learn how to label progressbar elements</u>.

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[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 about rol and required attributes</u> .	<u>es</u>
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. <u>Learn more about roles and required children elements</u> .	
[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 function Learn more about ARIA roles and required parent element.	ons.
O [role] values are valid	^
ARIA roles must have valid values in order to perform their intended accessibility functions. <u>Learn more about valid ARIA roles</u> .	Ā
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 unusa for users who rely on screen readers. Learn more about toggle fields.	ble
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. <u>Learn how to name tooltip elements</u> .	
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 unusable for users who rely on screen readers. Learn more about labeling treeitem elements.	it
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 about bypass</u> <u>blocks</u> .	<u>ass</u>

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O <dl>'s contain only properly-ordered <dt> and <dd> groups, <script>, <template> or <div> elements.</th><th>^</th></tr><tr><td>When definition lists are not properly marked up, screen readers may produce confusing or inaccurate output. Learn how to structure definition lists correctly.</td><td><u>v</u></td></tr><tr><td>O Definition list items are wrapped in <dl> elements</td><td>^</td></tr><tr><td>Definition list items (<dt> and <dd>) must be wrapped in a parent <dl> element to ensure that screen readers can properly announce them. Learn how to structure definition lists correctly.</td><td></td></tr><tr><td>O [id] attributes on active, focusable elements are unique</td><td>^</td></tr><tr><td>All focusable elements must have a unique id to ensure that they're visible to assistive technologies. Learn how to fix duplicate ids.</td><td></td></tr><tr><td>O ARIA IDs are unique</td><td>^</td></tr><tr><td>The value of an ARIA ID must be unique to prevent other instances from being overlooked by assistive technologies. Lea how to fix duplicate ARIA IDs.</td><td><u>ırn</u></td></tr><tr><td>O No form fields have multiple labels</td><td>^</td></tr><tr><td>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.</td><td></td></tr><tr><td>O <frame> or <iframe> elements have a title</td><td>^</td></tr><tr><td>Screen reader users rely on frame titles to describe the contents of frames. <u>Learn more about frame titles</u>.</td><td></td></tr><tr><td><html> element has an [xml:lang] attribute with the same base language as the [lang] attribute.</td><td>^</td></tr><tr><td>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.</td><td></td></tr><tr><td><pre>O <input type="image"> elements have [alt] text</pre></td><td>^</td></tr><tr><td>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.</td><td>İ</td></tr><tr><td>Elements with visible text labels have matching accessible names.</td><td>^</td></tr><tr><td>Visible text labels that do not match the accessible name can result in a confusing experience for screen reader users.  <u>Learn more about accessible names</u>.</td><td></td></tr><tr><td>Links are distinguishable without relying on color.</td><td>^</td></tr></tbody></table></script></dd></dt></dl>
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Low-contrast text is difficult or impossible for many users to read. Link text that is discernible improves the experience users with low vision. Learn how to make links distinguishable.	e for
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 macreate a frustrating or confusing experience. <u>Learn more about the refresh meta tag</u> .	ay
<object> elements have alternate text</object>	^
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.</object>	
Select elements have associated label elements.	^
Form elements without effective labels can create frustrating experiences for screen reader users. <u>Learn more about the select element</u> .	<u>1e</u>
O Skip links are focusable.	^
Including a skip link can help users skip to the main content to save time. Learn more about skip links.	
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 about the tabindex attribute</u> .	
<ul> <li>Tables have different content in the summary attribute and <caption>.</caption></li> </ul>	^
The summary attribute should describe the table structure, while <caption> should have the onscreen title. Accurate table mark-up helps users of screen readers. <u>Learn more about summary and caption</u>.</caption>	
Tables use <caption> instead of cells with the [colspan] attribute to indicate a caption.</caption>	^
Screen readers have features to make navigating tables easier. Ensuring that tables use the actual caption element inst of cells with the [colspan] attribute may improve the experience for screen reader users. Learn more about captions	
elements in a large  have one or more table headers.	^
Screen readers have features to make navigating tables easier. Ensuring that  elements in a large table (3 or more cells in width and height) have an associated table header may improve the experience for screen reader users. Learn about table headers.	
<ul> <li>Cells in a  element that use the [headers] attribute refer to table cells within the same table.</li> </ul>	^

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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 about the headers attribute. 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. All heading elements contain content. A heading with no content or inaccessible text prevent screen reader users from accessing information on the page's structure. Learn more about headings. Identical links have the same purpose. Links with the same destination should have the same description, to help users understand the link's purpose and decide whether to follow it. Learn more about identical links. Document has a main landmark. One main landmark helps screen reader users navigate a web page. Learn more about landmarks. Touch targets have sufficient size and spacing.



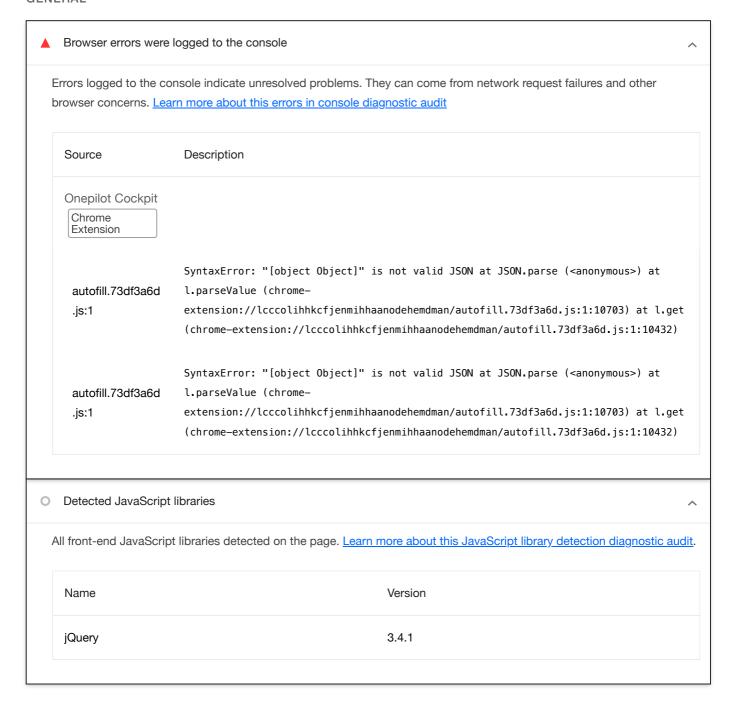
Touch targets with sufficient size and spacing help users who may have difficulty targeting small controls to activate the

targets. Learn more about touch targets.

## **Best Practices**

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#### **GENERAL**



#### TRUST AND SAFETY

A strong Content Security Policy (CSP) significantly r	reduces the risk of cross-site scripting	g (XSS) attacks. <u>Learn how to</u>
a CSP to prevent XSS		
Description	Directive	Severity

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PASSED AUDITS (12) Hide

Uses HTTPS	^
All sites should be protected with HTTPS, even ones that don't handle sensitive data. This includes avoiding <u>mixed content</u> , 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 use and is a prerequisite for HTTP/2 and many new web platform APIs. <u>Learn more about HTTPS</u> .	ers,
Avoids deprecated APIs	^
Deprecated APIs will eventually be removed from the browser. Learn more about deprecated APIs.	
Allows users to paste into input fields	^
Preventing input pasting is a bad practice for the UX, and weakens security by blocking password managers. <u>Learn moabout user-friendly input fields</u> .	<u>ore</u>
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.	ì
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. <u>Learn more about responsibly getting permission for notifications</u> .	ıest
Displays images with correct aspect ratio	^
Image display dimensions should match natural aspect ratio. <u>Learn more about image aspect ratio</u> .	
Serves images with appropriate resolution	^
Image natural dimensions should be proportional to the display size and the pixel ratio to maximize image clarity. <u>Learn how to provide responsive images</u> .	1
Page has the HTML doctype	^
Specifying a doctype prevents the browser from switching to quirks-mode. <u>Learn more about the doctype declaration</u> .	
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 Content-Type HTTP response header. Learn more about declaring the character encoding.	n the

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Avoids unload event listeners

The unload event does not fire reliably and listening for it can prevent browser optimizations like the Back-Forward Cache. Use pagehide or visibilitychange events instead. <u>Learn more about unload event listeners</u>

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. <u>Learn more about source maps</u>.

URL Map URL

localhost (1st Party)

...bootstrap/bootstrap.bundle.min.js (localhost)

...bootstrap/bootstrap.bundle.min.js.map (localhost)

Error: Failed fetching source map (404)

NOT APPLICABLE (1) Hide

Fonts with font-display: optional are preloaded

Preload optional fonts so first-time visitors may use them. Learn more about preloading fonts



#### 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

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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 more about Structured Data.</u>

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

PASSED AUDITS (12)

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. (TBT) 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 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. Image elements have [alt] attributes Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with an empty alt

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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.

Document uses legible font sizes - 100% legible text

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 about legible font sizes</u>.

Source	Selector	% of Page Text	Font Size
Legible text		100.00%	≥ 12px

Document avoids plugins

Search engines can't index plugin content, and many devices restrict plugins or don't support them. <u>Learn more about avoiding plugins</u>.

Tap targets are sized appropriately -100% appropriately sized tap targets

Interactive elements like buttons and links should be large enough (48x48px), or have enough space around them, to be easy enough to tap without overlapping onto other elements. <u>Learn more about tap targets</u>.

NOT APPLICABLE (2) Hide

o 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.



PWA

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These checks validate the aspects of a Progressive Web App. <u>Learn what</u> <u>makes a good Progressive Web App.</u>

#### **INSTALLABLE**

Web app manifest or service worker do not meet the installability requirements — 1 reason

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. With proper service worker and manifest implementations, browsers can proactively prompt users to add your app to their homescreen, which can lead to higher engagement. Learn more about manifest installability requirements.

Failure reason

Page has no manifest link> URL

#### **PWA OPTIMIZED**

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#### ADDITIONAL ITEMS TO MANUALLY CHECK (3)

Hide

Site works cross-browser	^
To reach the most number of users, sites should work across every major browser. <u>Learn about cross-browser</u> <u>compatibility.</u>	
Page transitions don't feel like they block on the network	^
Transitions should feel snappy as you tap around, even on a slow network. This experience is key to a user's perception performance. Learn more about page transitions.	າ of
O Each page has a URL	^
Ensure individual pages are deep linkable via URL and that URLs are unique for the purpose of shareability on social media. Learn more about providing deep links.	

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.



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