





## Performance

Metrics			=
First Contentful Paint	3.0 s	Time to Interactive	3.0 s
Speed Index	3.0 s	Total Blocking Time	0 ms
▲ Largest Contentful Paint	5.2 s	Cumulative Layout Shift	0

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

## View Original Trace























Opportunities — These suggestions can help your page load faster. They don't directly affect the Performance score.

Opportunity **Estimated Savings** 

Eliminate render-blocking resources

0.92 s ^

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

✓ Show 3rd-party resources (2)

**URL** 

Transfer Size Potential Savings

1,230 ms

...css/bootstrap.min.css (maxcdn.bootstrapcdn.com)

20.3 KiB

	URL	Transfer Size	Potenti Saving
	css/all.css (use.fontawesome.com)	13.3 KiB	1,080 ms
	css/style.css (michaelhesch.github.io)	1.9 KiB	290 ms
	Remove unused CSS		0.15 s
	Remove dead rules from stylesheets and defer the loading of CSS not used for above-the-fold unnecessary bytes consumed by network activity. <u>Learn more</u> .	d content to reduce	<b>,</b>
		Show 3rd-party	resources (2)
	URL	Transfer Size	Potenti Saving
	css/bootstrap.min.css (maxcdn.bootstrapcdn.com)	20.3 KiB	19.5 KiE
	css/all.css (use.fontawesome.com)	13.3 KiB	13.2 KiE
	Preload Largest Contentful Paint image		Error!
	Preload the image used by the LCP element in order to improve your LCP time. <u>Learn more</u> .		
	gnostics — More information about the performance of your application. These numbers don't formance score.  Ensure text remains visible during webfont load	t <u>directly affect</u> the	
	gnostics — More information about the performance of your application. These numbers don't formance score.		
	gnostics — More information about the performance of your application. These numbers don't formance score.  Ensure text remains visible during webfont load		
	gnostics — More information about the performance of your application. These numbers don't formance score.  Ensure text remains visible during webfont load	g. <u>Learn more</u> .	resources (2)
	gnostics — More information about the performance of your application. These numbers don't formance score.  Ensure text remains visible during webfont load  Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading	g. <u>Learn more</u> .	
	gnostics — More information about the performance of your application. These numbers don't formance score.  Ensure text remains visible during webfont load  Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading URL	g. <u>Learn more</u> .	resources (2) Potenti Saving
	gnostics — More information about the performance of your application. These numbers don't formance score.  Ensure text remains visible during webfont load  Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading URL v18/mem8YaGs1woff2 (fonts.gstatic.com)	g. <u>Learn more</u> .	resources (2 Potenti Saving 20 ms 40 ms
erf	gnostics — More information about the performance of your application. These numbers don't formance score.  Ensure text remains visible during webfont load  Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading URL v18/mem8YaGs1woff2 (fonts.gstatic.com) webfonts/fa-brands-400.woff2 (use.fontawesome.com)	g. <u>Learn more</u> .	resources (2 Potenti Savino 20 ms 40 ms
erf	gnostics — More information about the performance of your application. These numbers don't formance score.  Ensure text remains visible during webfont load  Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading URL v18/mem8YaGs1woff2 (fonts.gstatic.com) webfonts/fa-brands-400.woff2 (use.fontawesome.com)  Serve static assets with an efficient cache policy — 2 resources found	g. <u>Learn more</u> .	resources (2) Potenti Saving 20 ms
erf	gnostics — More information about the performance of your application. These numbers don't formance score.  Ensure text remains visible during webfont load  Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading URL v18/mem8YaGs1woff2 (fonts.gstatic.com) webfonts/fa-brands-400.woff2 (use.fontawesome.com)  Serve static assets with an efficient cache policy — 2 resources found	g. <u>Learn more</u> .  Show 3rd-party	resources (2) Potenti Saving 20 ms 40 ms
rerf	gnostics — More information about the performance of your application. These numbers don't formance score.  Ensure text remains visible during webfont load  Leverage the font-display CSS feature to ensure text is user-visible while webfonts are loading  URL v18/mem8YaGs1woff2 (fonts.gstatic.com) webfonts/fa-brands-400.woff2 (use.fontawesome.com)  Serve static assets with an efficient cache policy — 2 resources found  A long cache lifetime can speed up repeat visits to your page. Learn more.	g. <u>Learn more</u> .  Show 3rd-party  Show 3rd-party	Potenti Saving 20 ms 40 ms

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. <u>Learn more</u>. Maximum critical path latency: 380 ms

Initial Navigation

/ci-ms-1/join.html (michaelhesch.github.io)

...css/bootstrap.min.css (maxcdn.bootstrapcdn.com) - 30 ms, 20.29 KiB

...css/all.css (use.fontawesome.com)

...webfonts/fa-brands-400.woff2 (use.fontawesome.com) - 40 ms, 72.95 KiB

...css/style.css (michaelhesch.github.io)

/css?family=Open+Sans (fonts.googleapis.com)

...v18/mem8YaGs1....woff2 (fonts.gstatic.com) - 20 ms, 8.98 KiB

/jquery-3.3.1.slim.min.js (code.jquery.com) - 100 ms, 23.62 KiB

...umd/popper.min.js (cdnjs.cloudflare.com) - 30 ms, 6.81 KiB

...js/bootstrap.min.js (stackpath.bootstrapcdn.com) - 100 ms, 13.84 KiB

Keep request counts low and transfer sizes small — 11 requests • 621 KiB

To set budgets for the quantity and size of page resources, add a budget json file. Learn more.

Resource Type	Requests	Transfer Size
Total	11	621.1 KiB
Image	1	454.8 KiB
Font	2	81.9 KiB
Script	3	44.3 KiB
Stylesheet	4	37.0 KiB
Document	1	3.1 KiB
Media	0	0.0 KiB
Other	0	0.0 KiB
Third-party	8	161.3 KiB

Largest Contentful Paint element — 1 element found

This is the largest contentful element painted within the viewport. Learn More

Element

div#hero-image

Avoid large layout shifts — 1 element found

These DOM elements contribute most to the CLS of the page.

Element	CL	S Contribution
h3#member-app-title		
		0
Avoid long main-thread tasks — 2 long tasks found		^
Lists the longest tasks on the main thread, useful for identifying worst contributors to	input delay. <u>Learn more</u>	
	✓ Show 3rd-party	resources (1)
URL	Start Time	Duration
/ci-ms-1/join.html (michaelhesch.github.io)	953 ms	71 ms
/jquery-3.3.1.slim.min.js (code.jquery.com)	2,535 ms	61 ms
sed audits (27)		^
Properly size images		^
Serve images that are appropriately-sized to save cellular data and improve load time	e. <u>Learn more</u> .	
Defer offscreen images		^
Consider lazy-loading offscreen and hidden images after all critical resources have find interactive. <u>Learn more</u> .	nished loading to lower time	to
Minify CSS		^
Minifying CSS files can reduce network payload sizes. <u>Learn more</u> .		
Minify JavaScript		^
Minifying JavaScript files can reduce payload sizes and script parse time. Learn more	<u>e</u> .	
Remove unused JavaScript		^
Remove unused JavaScript to reduce bytes consumed by network activity. <u>Learn mo</u>	<u>re</u> .	
Efficiently encode images		^
Optimized images load faster and consume less cellular data. <u>Learn more</u> .		
Serve images in next-gen formats		^
Image formats like JPEG 2000, JPEG XR, and WebP often provide better compression faster downloads and less data consumption. <u>Learn more</u> .	on than PNG or JPEG, whic	ch means
Enable text compression		^
Text-based resources should be served with compression (gzip, deflate or brotli) to more.	ninimize total network bytes.	<u>Learn</u>

Preconnect to required origins	^
Consider adding 'preconnect' or 'dns-prefetch' resource hints to establish early connect <u>Learn more</u> .	tions to important third-party origins.
Initial server response time was short — Root document took 140 ms	^
Keep the server response time for the main document short because all other requests of	depend on it. <u>Learn more</u> .
	Show 3rd-party resources (0)
URL	Time Spent
/ci-ms-1/join.html (michaelhesch.github.io)	140 ms
Avoid multiple page redirects	^
Redirects introduce additional delays before the page can be loaded. <u>Learn more</u> .	
Preload key requests	^
Consider using ` <link rel="preload"/> ` to prioritize fetching resources that are currently require.	uested later in page load. <u>Learn</u>
Use HTTP/2	^
HTTP/2 offers many benefits over HTTP/1.1, including binary headers and multiplexing.	<u>Learn more</u> .
Use video formats for animated content	^
Large GIFs are inefficient for delivering animated content. Consider using MPEG4/WebN PNG/WebP for static images instead of GIF to save network bytes. <u>Learn more</u>	If videos for animations and
Remove duplicate modules in JavaScript bundles	^
Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes	consumed by network activity.
Avoid serving legacy JavaScript to modern browsers	^
Polyfills and transforms enable legacy browsers to use new JavaScript features. However modern browsers. For your bundled JavaScript, adopt a modern script deployment strate detection to reduce the amount of code shipped to modern browsers, while retaining sup More	egy using module/nomodule feature
Avoids enormous network payloads — Total size was 621 KiB	^
Large network payloads cost users real money and are highly correlated with long load t	imes. <u>Learn more</u> .
	Show 3rd-party resources (7)
URL	Transfer Size
img/hero.jpg (michaelhesch.github.io)	454.8 KiB
webfonts/fa-brands-400.woff2 (use.fontawesome.com)	72.9 KiB
/jquery-3.3.1.slim.min.js (code.jquery.com)	23.6 KiB
css/bootstrap.min.css (maxcdn.bootstrapcdn.com)	20.3 KiB

URL			Transfer Size
js/bootstrap.min.js (stackpath.bootstrapcdn.com)			13.8 KiB
css/all.css (use.fontawesome.com)			13.3 KiB
v18/mem8YaGs1woff2 (fonts.gstatic.com)			9.0 KiB
umd/popper.min.js (cdnjs.cloudflare.com)			6.8 KiB
/ci-ms-1/join.html (michaelhesch.github.io)			3.1 KiB
css/style.css (michaelhesch.github.io)			1.9 KiB
Avoids an excessive DOM size — 93 elements			^
A large DOM will increase memory usage, cause longer style calcu	lations, and produc	ce costly <u>layout reflows</u> . <u>L</u>	earn more.
Chatiatia	Пата		Value
Statistic	Eleme	nt	Value
Total DOM Elements			93
Maximum DOM Depth	i		11
Maximum Child Elements	ul		10
User Timing marks and measures			^
Consider instrumenting your app with the User Timing API to measure experiences. <u>Learn more</u> .	ure your app's real	-world performance durin	g key user
JavaScript execution time — 0.1 s			^
Consider reducing the time spent parsing, compiling, and executing with this. <u>Learn more</u> .	JS. You may find	delivering smaller JS pay	loads helps
		Show 3rd-part	y resources (1)

URL	Total CPU Time	Script Evaluation	Script Parse
/ci-ms-1/join.html (michaelhesch.github.io)	251 ms	5 ms	1 ms
Unattributable	98 ms	7 ms	1 ms
/jquery-3.3.1.slim.min.js (code.jquery.com)	57 ms	43 ms	7 ms

Minimizes main-thread work  $\,-\,$  0.5 s

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

Category	Time Spent
Other	155 ms
Style & Layout	88 ms
Rendering	85 ms

Category		Time Spent
Script Evaluation		80 ms
Parse HTML & CSS		55 ms
Script Parsing & Compilation		17 ms
Minimize third-party usage — Third-party code blocked the main th	read for 0 ms	^
Third-party code can significantly impact load performance. Limit the load third-party code after your page has primarily finished loading. I		d-party providers and try to
		Show 3rd-party resources (0)
Third-Party	Transfer Size	Main-Thread Blocking Time
FontAwesome CDN	86 KiB	0 ms
webfonts/fa-brands-400.woff2 (use.fontawesome.com)	73 KiB	0 ms
css/all.css (use.fontawesome.com)	13 KiB	0 ms
Bootstrap CDN	34 KiB	0 ms
css/bootstrap.min.css (maxcdn.bootstrapcdn.com)	20 KiB	0 ms
js/bootstrap.min.js (stackpath.bootstrapcdn.com)	14 KiB	0 ms
jQuery CDN	24 KiB	0 ms
/jquery-3.3.1.slim.min.js (code.jquery.com)	24 KiB	0 ms
Google Fonts	10 KiB	0 ms
v18/mem8YaGs1woff2 (fonts.gstatic.com)	9 KiB	0 ms
Cloudflare CDN	7 KiB	0 ms
umd/popper.min.js (cdnjs.cloudflare.com)	7 KiB	0 ms
Lazy load third-party resources with facades		^
Some third-party embeds can be lazy loaded. Consider replacing the	em with a facade until they	are required. <u>Learn more</u> .
Uses passive listeners to improve scrolling performance		^
Consider marking your touch and wheel event listeners as `passive`	to improve your page's sc	roll performance. <u>Learn more</u> .
Avoids document.write()		^
For users on slow connections, external scripts dynamically injected seconds. <u>Learn more</u> .	via `document.write()` can	delay page load by tens of
Avoid non-composited animations		^
Animations which are not composited can be janky and increase CL	S. <u>Learn more</u>	
Image elements have explicit width and height		^
Set an explicit width and height on image elements to reduce layout	shifts and improve CLS. <u>L</u>	earn more



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

**Tables and lists** — These are opportunities to improve the experience of reading tabular or list data using assistive technology, like a screen reader.

Lists do not 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. <u>Learn more</u> .	
Failing Elements	
ul	
<b>litional items to manually check (10)</b> — These items address areas which an automated testing tool cannot cover. Learn e in our guide on <u>conducting an accessibility review</u> .	^
The page has a logical tab order	^
Tabbing through the page follows the visual layout. Users cannot focus elements that are offscreen. <u>Learn more</u> .	
Interactive controls are keyboard focusable	^
Custom interactive controls are keyboard focusable and display a focus indicator. <u>Learn more</u> .	
Interactive elements indicate their purpose and state	^
Interactive elements, such as links and buttons, should indicate their state and be distinguishable from non-interactive elements. <u>Learn more</u> .	
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. <u>Learn more</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. <u>Learn more</u> .	
Custom controls have associated labels	^
Custom interactive controls have associated labels, provided by aria-label or aria-labelledby. <u>Learn more</u> .	
Custom controls have ARIA roles	^

Custom interactive controls have appropriate ARIA roles. <u>Learn more</u> .	
Visual order on the page follows DOM order	^
DOM order matches the visual order, improving navigation for assistive technology. <u>Learn more</u> .	
Offscreen content is hidden from assistive technology	^
Offscreen content is hidden with display: none or aria-hidden=true. Learn more.	
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 techniques.</nav></main>	iology.
ssed audits (17)	^
[aria-*] attributes match their roles	^
Each ARIA `role` supports a specific subset of `aria-*` attributes. Mismatching these invalidates the `aria-*` attributes. <a href="more">more</a> .	<u>Learn</u>
[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 ` <box\text{box} learn="" more.<="" td=""><td>ody&gt;`.</td></box\text{box}>	ody>`.
[aria-*] attributes have valid values	^
Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid values. <u>Learn more</u> .	
[aria-*] attributes are valid and not misspelled	^
Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid names. <u>Learn more</u> .	
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 rely on screen readers. <u>Learn more</u> .	s who
The page contains a heading, skip link, or landmark region	^
Adding ways to bypass repetitive content lets keyboard users navigate the page more efficiently. <u>Learn more</u> .	
Background and foreground colors have a sufficient contrast ratio	^
Low-contrast text is difficult or impossible for many users to read. <u>Learn more</u> .	
Document has a <title> element&lt;/td&gt;&lt;td&gt;^&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;The title gives screen reader users an overview of the page, and search engine users rely on it heavily to determine if is relevant to their search. &lt;u&gt;Learn more&lt;/u&gt;.&lt;/td&gt;&lt;td&gt;a page&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;[id] attributes on active, focusable elements are unique&lt;/td&gt;&lt;td&gt;^&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;All focusable elements must have a unique `id` to ensure that they're visible to assistive technologies. &lt;u&gt;Learn more&lt;/u&gt;.&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;tr&gt;&lt;td&gt;ARIA IDs are unique&lt;/td&gt;&lt;td&gt;&lt;/td&gt;&lt;/tr&gt;&lt;/tbody&gt;&lt;/table&gt;</title>	

more. 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. <a href="html"><a html</a>> 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. <a href="html"><a href="html">html</a>> element has a valid value for its [lang] attribute Specifying a valid BCP 47 language helps screen readers announce text properly. Learn more. Form elements have associated labels Labels ensure that form controls are announced properly by assistive technologies, like screen readers. Learn more. 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 more. List items () are contained within or parent elements Screen readers require list items (`') to be contained within a parent '' or '' to be announced properly. Learn more. [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. Not applicable (26) [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. 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 more. [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 more. 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.

The value of an ARIA ID must be unique to prevent other instances from being overlooked by assistive technologies. Learn

ARIA meter 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 more ARIA progressbar 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 more. [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. 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. [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. [role] values are valid ARIA roles must have valid values in order to perform their intended accessibility functions. Learn more. 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. ARIA tooltip 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 more ARIA treeitem 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 more. <dl>'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 more. Definition list items are wrapped in <dl> elements Definition list items ('<dt>' and '<dd>') must be wrapped in a parent '<dl>' element to ensure that screen readers can properly announce them. Learn more. 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 more. <frame> or <iframe> elements have a title Screen reader users rely on frame titles to describe the contents of frames. Learn more.

Image elements have [alt] attributes

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

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

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

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

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

<object> elements have [alt] text

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

No element has a [tabindex] value greater than 0

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

Cells in a element that use the [headers] attribute refer to table cells within the same table.

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

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

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

[lang] attributes have a valid value

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

<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.



# **Best Practices**

### Trust and Safety

Some third-party scripts may contain known security vulnerabilities that are easily identified and exploited by attackers. Learn more.

Library Version	Vulnerability Count	Highest Severity
Bootstrap@4.2.1	1	Medium
jQuery@3.3.1	3	Medium

#### General

Issues were logged 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.

Show 3rd-party resources (0)

Issue type

SameSite cookie

...css/bootstrap.min.css (maxcdn.bootstrapcdn.com)

#### Passed audits (15)

#### 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 users, and is a prerequisite for HTTP/2 and many new web platform APIs. <u>Learn more</u>.

Links to cross-origin destinations are safe

Add `rel="noopener"` or `rel="noreferrer"` to any external links to improve performance and prevent security vulnerabilities. <u>Learn more</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. <u>Learn more</u>.

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</u>.

Allows users to paste into password fields

Preventing password pasting undermines good security policy. Learn more.

Displays images with correct aspect ratio

Image display dimensions should match natural aspect ratio	<u>Learn more</u> .	
Serves images with appropriate resolution		^
Image natural dimensions should be proportional to the disp more.	ay size and the pixel ratio to maximize image clarity. <u>Learn</u>	
Page has the HTML doctype		^
Specifying a doctype prevents the browser from switching to	quirks-mode. <u>Learn more</u> .	
Properly defines charset		^
A character encoding declaration is required. It can be done Content-Type HTTP response header. <u>Learn more</u> .	with a ` <meta/> ` tag in the first 1024 bytes of the HTML or in the	
Avoids unload event listeners		^
The `unload` event does not fire reliably and listening for it c Consider using the `pagehide` or `visibilitychange` events in	an prevent browser optimizations like the Back-Forward Cache. stead. <u>Learn More</u>	
Avoids Application Cache		^
Application Cache is deprecated. <u>Learn more</u> .		
Detected JavaScript libraries		^
All front-end JavaScript libraries detected on the page. Learn	ı more.	
Name	Version	
Name  Bootstrap	Version 4.2.1	
Bootstrap	4.2.1 3.3.1	^
Bootstrap	4.2.1 3.3.1	~
Bootstrap jQuery Avoids deprecated APIs	4.2.1 3.3.1 er. <u>Learn more</u> .	^
Bootstrap jQuery  Avoids deprecated APIs  Deprecated APIs will eventually be removed from the brows  No browser errors logged to the console	4.2.1 3.3.1 er. <u>Learn more</u> .	
Bootstrap jQuery  Avoids deprecated APIs  Deprecated APIs will eventually be removed from the brows  No browser errors logged to the console  Errors logged to the console indicate unresolved problems.	4.2.1 3.3.1  er. Learn more.  They can come from network request failures and other browser	
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Not applicable (1)		
	Fonts with font-display: optional are preloaded	^
	Preload `optional` fonts so first-time visitors may use them. <u>Learn More</u>	



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

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

Tap targets are not sized appropriately — 80% appropriately sized tap targets

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

Tap Target

Size

Overlapping Target

a

4x22

a

4x22

a

4x22

**Additional items to manually check (1)** — Run these additional validators on your site to check additional SEO best practices.

Structured data is valid

Hasa <meta name="&lt;/th&gt;&lt;th&gt;viewport"/> tag with width or init:	ial-scale		
Add a ` <meta nam<="" td=""/> <td>e="viewport"&gt;` tag to optimize yo</td> <td>ur app for mobile screens. <u>Learn mo</u></td> <td><u>re</u>.</td>	e="viewport">` tag to optimize yo	ur app for mobile screens. <u>Learn mo</u>	<u>re</u> .
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-	en reader users an overview of the search. <u>Learn more</u> .	ne page, and search engine users rel	y on it heavily to determine if a p
Document has a m	eta description		
Meta descriptions r	nay be included in search results	to concisely summarize page conter	nt. <u>Learn more</u> .
Page has successf	ul HTTP status code		
Pages with unsucc	essful HTTP status codes may no	ot be indexed properly. <u>Learn more</u> .	
Links have descrip	tive text		
Descriptive link tex	t helps search engines understan	nd your content. <u>Learn more</u> .	
Links are crawlable	<b>,</b>		
Search engines ma	ay use `href` attributes on links to	crawl websites. Ensure that the `hre site can be discovered. Learn More	ਿattribute of anchor elements lir
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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. <u>Learn more</u> .		
Image elements have [alt] attributes	^	
Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with an empty alt attribute. <u>Learn more</u> .		
Document has a valid rel=canonical	^	
Canonical links suggest which URL to show in search results. <u>Learn more</u> .		

## Runtime Settings

URL https://michaelhesch.github.io/ci-ms-1/join.html

**Fetch Time** Apr 14, 2021, 11:27 PM GMT+1

**Device** Emulated Moto G4

**Network throttling** 150 ms TCP RTT, 1,638.4 Kbps throughput (Simulated)

**CPU throttling** 4x slowdown (Simulated)

Channel devtools

User agent (host) Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/89.0.4389.114 Safari/537.36

User agent (network) Mozilla/5.0 (Linux; Android 7.0; Moto G (4)) AppleWebKit/537.36 (KHTML, like

Gecko) Chrome/84.0.4143.7 Mobile Safari/537.36 Chrome-Lighthouse

CPU/Memory Power 1279

Axe version 4.1.1

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