

Optimize Font Awesome



Optimize Font Awesome to ridiculously low size of 10KB!

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🕒 9 Mins read

Icons are an integral part of web designing. Gone are the days where individual icons were used like an image. Now it's the time of web fonts. Font awesome is one such web font. It is just like a font but in place of letters, we have icons!

Dave Gandy created font awesome in 2012. Many designers use this instead of PNG, JPEG or SVG images because font awesome makes designing easy. Almost all kinds of icons are available. They are easy to use and they are infinitely scalable!



A simple website uses at least 4 to 5 icons. If we include share button icons and footer icons, the number grows. Why do we use such a huge library for just 10 icons? Because adding or

removing or changing an icon is very easy in font awesome. If you have used local png icons using css sprite sheets, you'll know the pain of changing or adding an icon.

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Font awesome makes a web designers life easy. Adding icons is as simple as adding a `<h1>` tag. Resizing is done through attributes, flipping, stacking, spinning is all possible with font awesome. But apart from those 10 icons and some styles, all other icons are of no use to us. They load along with the ones we need.

Though font awesome is cached by browsers since many websites use it, we have to give attention to first-time visitors who may have a browser without cached font awesome css. Moreover, font awesome version updation is done every time when new icons are added and you should also keep version of the CDN link up to date.

Why should we optimize font awesome?

I like my website to load faster on desktops as well as on mobile devices. It is one of the main reasons why I switched from WordPress to Jekyll.

Read: [Why did I choose Jekyll over WordPress?!](#)

*If we are using only 10
icons then why should we
load 100 other icons?*

Since fontawesome is a huge file, we have to trim it down to our needs. If we are using only 10 icons then why should we load 100 other icons? The size of font awesome web font is 90KB. Added to that, minified font awesome css is 30KB. So overall 120KB! What I'm trying is to reduce this to below 12KB which is more than **90%** compression!!

This will decrease the load time multiple folds! My website scored 89% on Google pagespeed insights after implementing this. It used to be 52%!

How can we optimize font awesome?

Basic idea is to edit the font file to make it as small as possible. Removing unwanted glyphs will reduce the size drastically. But we should analyze our website to make sure we note down all the font awesome icons that are in use.

In my case, removing unused glyphs reduced the `woff` file size from 90KB to 8.5KB. This size depends on how many icons you need. The size increase with the increase in the number of icons. Removing unwanted css from `fontawesome.min.css` reduced the size from 30KB to 2KB. The overall size of font awesome after optimizing is around 11KB!

There are two ways to do this.

1. The hard way(generating a custom font on your own)

2. The easy way(usig a generator)

The Hard Way

I do not recommend this to everyone. This requires some CSS skills to troubleshoot the issues you may come across.

Step 1: Localize Font awesome

We cannot edit font served from CDN. So we should use font awesome locally. [Download fontawesome](#) here. Remove the font awesome CDN link from the head tag if you are using it. Go to `http://fontawesome.io/` and download the latest version of fontawesome. Unzip and keep it in the website repository. In our case, the root of the repository.

Call the css file which is inside font awesome css folder in the head tag like this.

```
</> HTML
```

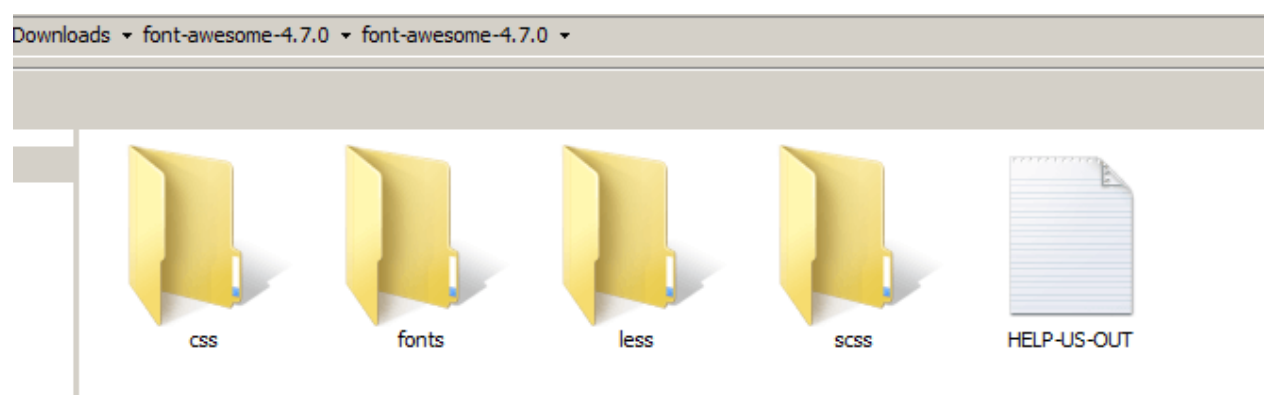
```
<link rel="stylesheet" href="/font-awesome/css/font-awesome.css">
```

You will also have a minified file `font-awesome.min.css`. But let's not use it right now as we may have to edit css.

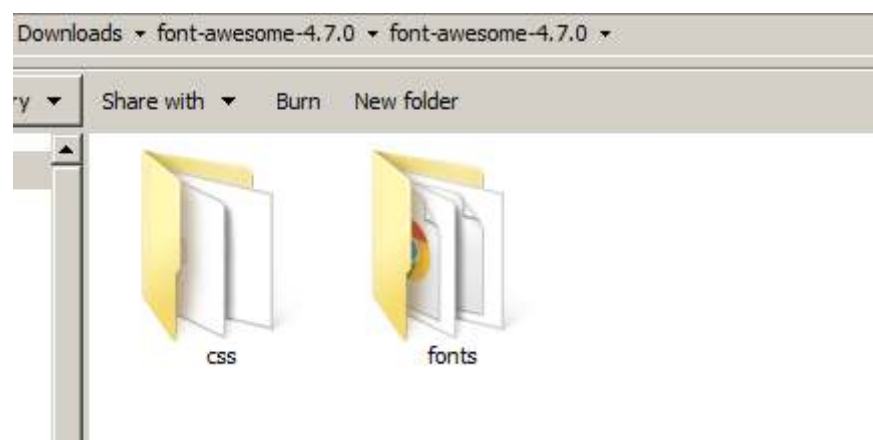
Once this is done, clear cache from the browser and load your website locally (`jeekyll serve` if Jekyll site). Check if the font awesome icons are loading. Try to refresh by pressing `Ctrl+f5` several times. If the font is still loading then we are good to go to the next step.

Step 2: Remove unnecessary files

When you and extract the files, you'll see these folders.



But we just need the CSS and Fonts. We can delete other variants.



For a font to load, modern browsers just need `woff` file. So other files such as `woff2`, `ttf`, `eot`, `svg` are not necessary. So delete all these files from the **fonts** folder and leave only `fontawesome-webfont.woff`.

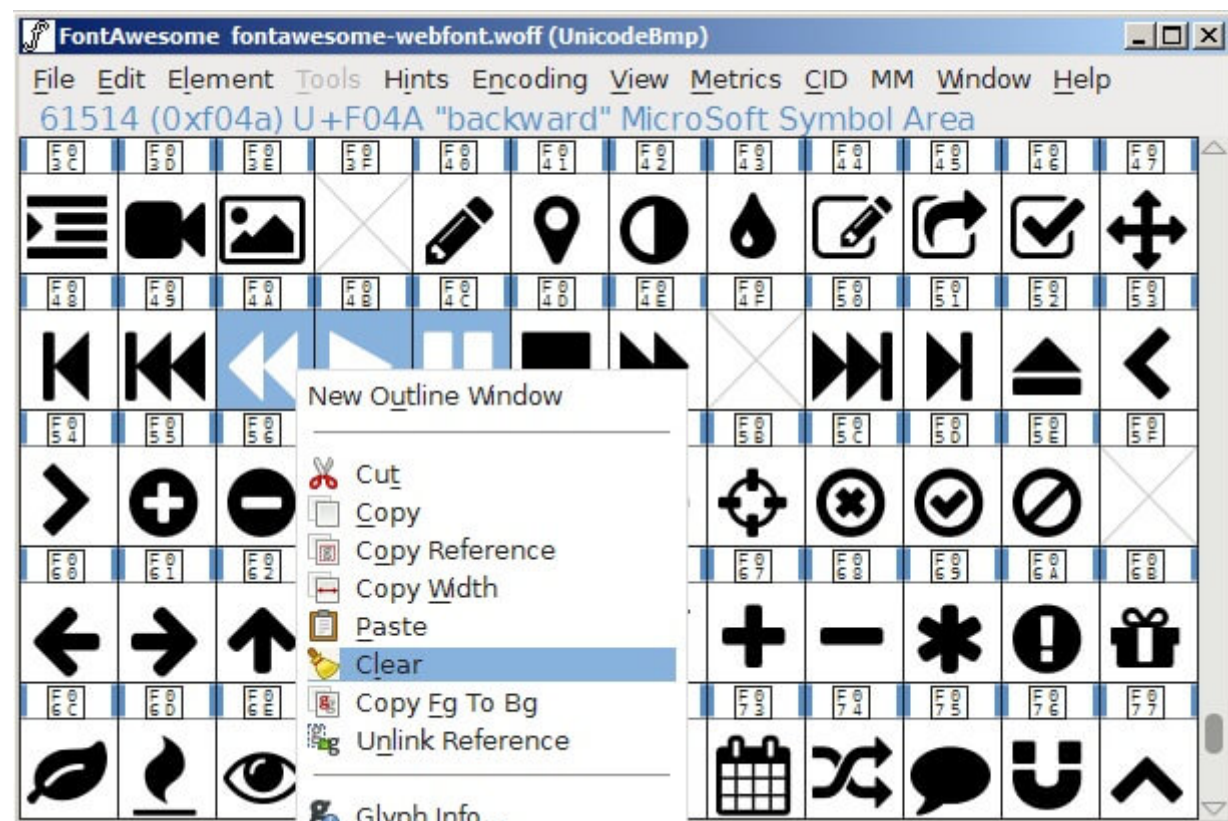
Font awesome has **less** and **scss** variants which you can use or delete them. Since using only the css variant, so I'm deleting others. So **css** and **fonts** folders are enough to work with.

Step 3: Edit the font file

This step needs a small application. Go to [FontForge](#), download and install the application.

Open `fontawesome-webfont.woff` with this application and find the glyphs. You may have to scroll down a lot. You can go to **Encoding** then click on **Compact** to get them right on the top.

Now clear any glyph you think is not necessary and you may not use it in the future. This is where you have to browse through the website and look for all the icons you have used.



I use icons for share bar, footer and mostly on about page. So I kept those icons and cleared out everything else. Hold **Shift** for multiple selection. Now, click on **File** and then on **Generate Fonts**. Save it with any name you like.

This file is your new web font `woff` that should be used inside fonts folder. It is better to rename it back to `fontawesome-webfont.woff` and replace the original with this one.

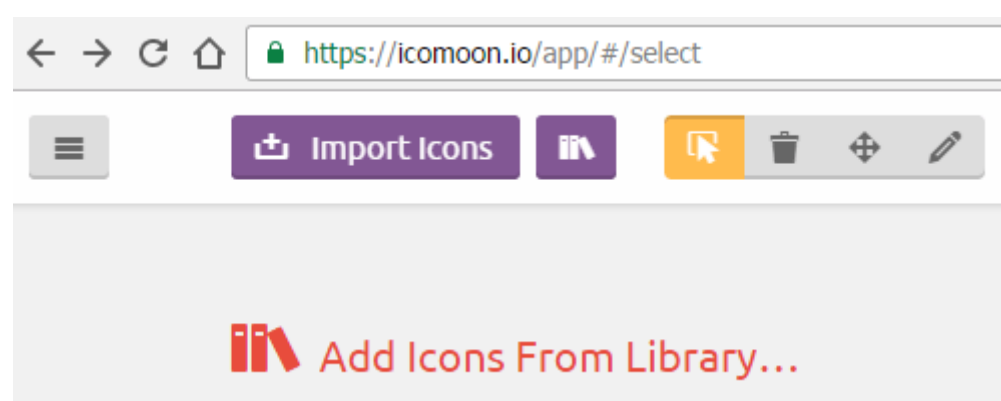
Test the website again to check whether all the icons are loading(they should) and push changes. This can be further optimized by converting the font to base64 and hence reducing one more request!

The Easy Way

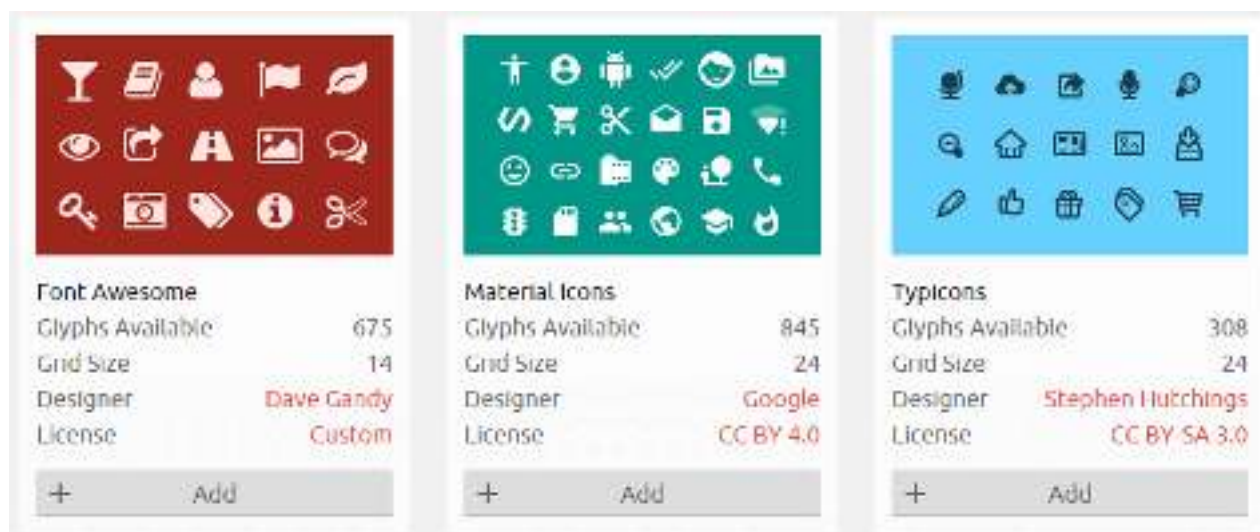
A user [egurelli](#) suggested an easier way to optimize fontawesome. I think **IcoMoon** is a great way to do it. You can also choose from some really good icon packages apart from Fontawesome.

Select Fontawesome Package

Log on to <https://icomoon.io/app/> and select **Add Icons From Library...** Find Fontawesome and click on **Add**. You will be redirected to a selection window.

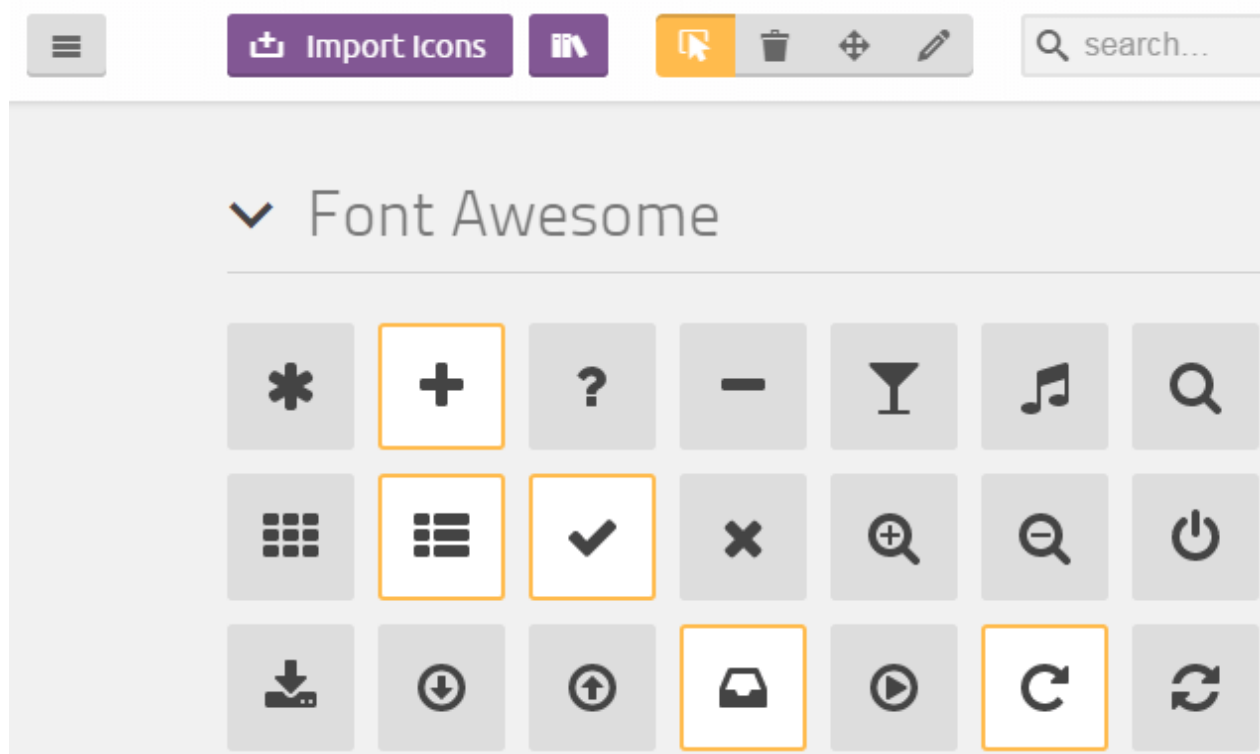


You can also select multiple icon packages. This makes IcoMoon highly customizable font generator.



Select Icons

In this window, select all the icons you want by clicking on them. Once you are done, click on **Generate Font** at the bottom.



Download the font

IcoMoon will show the icons that are selected and gives you an option to download these icons as a font file. The zip file will contain all the necessary files like `svg`, `eot`, `woff` etc., along with a css file `style`.

Keep these files at the root of the website and link the `style.css` file in head tag. If you are in doubt then check the `demo.html` file which is included in the downloaded font package.

Alternatives

Before you decide using fontawesome, think of using these alternatives. These options are pretty good for a minimal website.

1. [Bootstrap 5 Icons](#) {: target="_blank"}{: rel="nofollow"}
2. [Unicode](#)
3. [Bytesize SVG Icons](#)

Bootstrap 5 will be rolling out with its own icons. They actually had something called glyphicons in their earlier versions but discontinued later. Bootstrap icons do not have any brand or social media icons yet(v1.0.0-alpha3) but I hope eventually they will be adding it. The advantage of using Bootstrap icons is that it provides individual SVG files for each icon. You can directly embed them in your code(good for animations) or embed them as image tags.

There are some other ways to speed up Jekyll websites.

Read: [13 Tested ways to Speed up Jekyll Blog](#)

Conclusion

You may use Bootstrap, Font awesome or any similar web font in your website. But make sure you optimize them to use only things that are necessary. Every byte you save, every request you reduce improves page speed by milliseconds. Even a single millisecond improvement in page speed matters.

Thanks for reading!



Also read



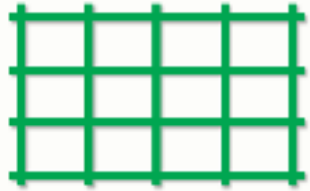
SVELTE SHOPPING CART

SVELTE SHOPPING CART



WHY SVELTE?

WHY DO I LIKE SVELTE



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IMAGE OPTIMIZATION



WP TO JEKYL

4 STEPS TO MIGRATE F...



JEKYL SITE SCORING ...

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I have been using Bootstrap to design most of my client websites. For simpler ...

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OR SIGN UP WITH DISQUS ?

Name

- egurelli

• 6 years ago

Hi thanks for article, there are much easier ways :

<https://github.com/FortAwes...>

3

^ | v

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- sharathdt

webjeda

➔ egurelli

• 6 years ago

@egurelli thank you :) Updated the article based on your input.

3

^ | v

• Reply • Share >
- egurelli

➔ sharathdt

• 6 years ago

Your welcome mate, indeed icomoon eaiser too use, have a nice day.

1

^ | v

• Reply • Share >
- Ashoksinh Gohil

• 5 years ago

Awesome article.....i find this article after searching lot...because I new and find that fc awesome download file size ... 100 kb.....so before reading I preferred svg because I only 5 icon on pagenow I can go through font awesome which nice

2

^ | v

1 • Reply • Share >
- Scitech

• 2 years ago

Hi, I need your opinion about that. I implemented some external fonts to my site: one C Fonts and a set of 14 FontAwesome icons. I load them from the CSS, using the @font However, when I check my cached version on Google, they appear as rectangles, so C can't see them. Is it ok if I load the fonts using the link tag? What is the best way of loa them? Thanks in advance!

1

^ | v

• Reply • Share >
- sharathdt

webjeda

➔ Scitech

• 2 years ago

looks like your font src URL isn't right. Check if they point to the fonts folder whi the fonts are located. You can check for errors in browser inspect console also.

1

^ | v

• Reply • Share >
- Scitech

➔ sharathdt

• 2 years ago

Thanks. It's really rare, because I have my CSS into /assets/css/style.cs to access the fonts, from the CSS, I have this URL: url('../fonts/oswald-v regular.woff'). What I could try is to use the following: url('/assets/fonts/o v29-latin-regular.woff'). I'm gonna try this, index a new post and see if th page shows the icons and the other Google Font (self-hosting them).

^ | v

• Reply • Share >
- Valeria Vernon

• 3 years ago

I felt that using some code for the only two icons I needed would have been an excelle solution. I found your article after searching for hours so I'm filing your url under the he GOLD! Thank you, thank you very much

1

^ | v

• Reply • Share >
- sharathdt

webjeda

➔ Valeria Vernon

• 3 years ago

Thank you @Valeria Vernon :)

^ | v

• Reply • Share >
- Espen

• 2 years ago

You do realized that scoring 89 on Google PageSpeed is pretty horrible in itself right? :

^ | v

• Reply • Share >
- sharathdt

webjeda

➔ Espen

• 2 years ago

Do you know how much youtube.com scores on PageSpeed Insights?

^ | v

• Reply • Share >
- Espen

➔ sharathdt

• 2 years ago

Doesn't matter. Google can do as they please. and with YouTube. they c

...because, Google can do as they please, and that's because, they're not about Chrome.

Every single website I have, score between 95 and 100 on Google PageSpeed Insights.

^ | v 1 • Reply • Share ›

Sau64 ➔ Espen • a year ago

the only useful thing i find in Google PageSpeed is the field data. Google cares shit about scoring, how Google cares about some points when all it matters is user experience, having a 100 score doesn't mean you give a good user experience, only that your page is pure text and probably loads nothing. There is no big site with good scoring.

1 ^ | v 1 • Reply • Share ›

Espen ➔ Sau64 • a year ago • edited

Yeah, no, Google Pagespeed has nothing to do with what you load. Google PageSpeed does not measure size (Even tho it does that to). It measures how you load your resources, a low score indicates that you're loading your resources the wrong way (And is mainly what pagespeed is for) regardless of how large they are.

You might not care, but Google does, and they will punish you every single time they try and index your site.

^ | v • Reply • Share ›

Sau64 ➔ Espen • a year ago

Google does not measure how you load your stuff... you may do wrong, google only tell you how much it took to load, render and make the site usable, that's why the result is not just a number, you can break it down with FCP, LCP, FID, CLS, blocking times, time to interactivity.

Mobile is tested on a Nexus 5, loading a blog site will not be the same as loading the index of amazon. So no.. amazon is not loading the wrong way, it's way bigger and complex than a simple blog.

1 ^ | v • Reply • Share ›

Espen ➔ Sau64 • a year ago

You really should take a look at PageSpeeds results then... They tell you quite a bit more than you've realized.

^ | v • Reply • Share ›

Sau64 ➔ Espen • a year ago

I don't need the basic pagespeed tips. The point of this was that pagespeed is about the time it took to load all the content of your page. A good score only means it loads fast on an old device, but the more content you add the more it takes. That's the point of this article, do not load things you don't need, but pages like amazon, twitch, twitter, youtube has high scores, not because they suck at coding and you rock, because they are heavier, bigger than what you probably do.

And the most usefull feature i find there is the field data. That tells you a lot more than the score itself. You may get a 40 score but if the user reports that your site loads the page twice as fast as pagespeed, then... who cares about a synthetic benchmark?

^ | v • Reply • Share ›

Espen ➔ Sau64 • a year ago

You need all the tips you can get buddy... You're literally saying you're better and are better than Google. And yet, you have achieved a score of nothing of value.

I've never said Amazon, Twitch, Twitter, YouTube or any of the others you mention with a billion dollar ad-budget suck, but they didn't get a good score because of a good user experience or good code to begin with, they have a lot of ads, ads ads.

What I do, is care about every aspect of my code, it's why I work for Google and you don't.

^ | v • Reply • Share ›

Burak Mete Erdoğan • 2 years ago

dual tone not working

^ | v • Reply • Share ›

jdbd • 3 years ago • edited

If you get as far as opening the .woff file in Fontforge, then this script should help you.
to quickly clear all the glyphs I didn't want to keep:

<https://gist.github.com/jdb...>

^ | v • Reply • Share ›

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