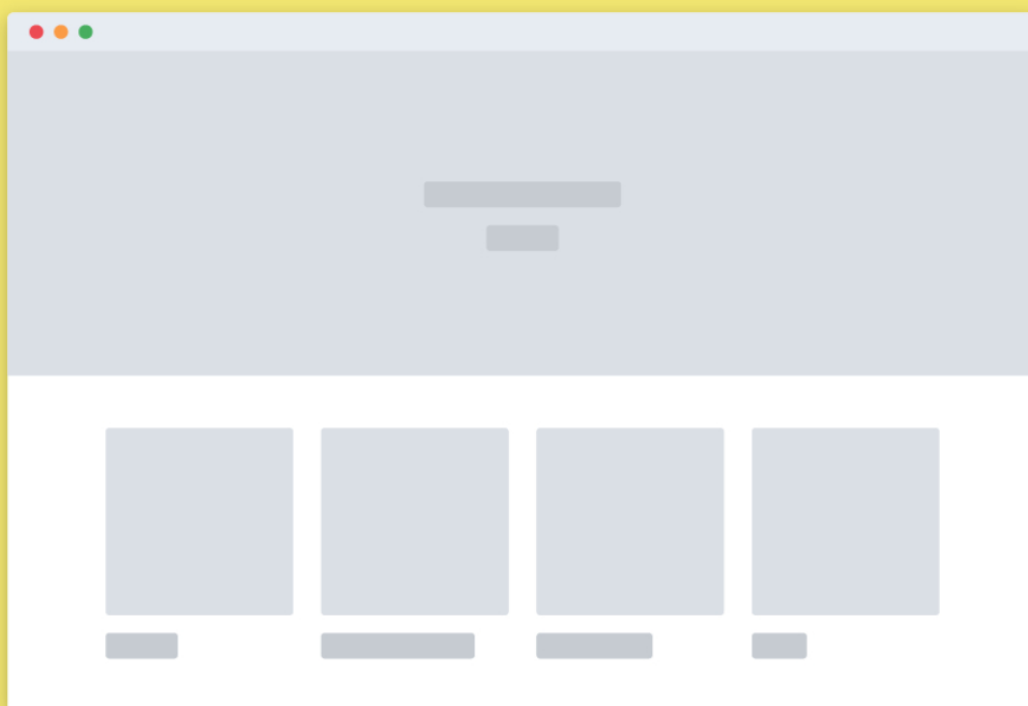


Cracking the front-end interview

Jonathan Z. White [Follow](#)

May 3, 2016 · 5 min read

By [@jonathanzwhite](#)

Technical front-end interviews are difficult. That's a fact. Not only do you need to have a solid grasp of computer science fundamentals, but also an understanding of things like web performance, build systems, and CSS layout engines.

While there are resources out there, I've found that there are only a few *complete* guides for helping you prepare for a front-end interview. So I decided to write a topic by topic outline that will hopefully help you ace your next interview.

Before the interview

So before your interview, ask your recruiter for the format of the interview. Some interviews might revolve around a whiteboard while others might use an online text editor like CoderPad. It's important to know so you can practice in the environment that your interview is going to take place in.

Also, ask your recruiter for tips on what topics to focus on when preparing. The reason behind this is because in addition to front-end specific question, some companies will ask you traditional computer science questions about topics like searching and sorting algorithms.

Front-end concepts

HTML and CSS, Javascript, and Javascript design patterns are the key concepts that you will be tested on during an interview. Go through the list and make sure you are comfortable with each topic.

HTML and CSS

HTML and CSS is like the bread and butter of front-end development. During interviews, you will most likely be asked questions about the nuances of HTML and CSS. Also, be prepared to be asked to `code up a layout based on a mockup`.

Top highlight

Just in case you need an HTML and CSS refresher, here are a few basic concepts to look over.

- [CSS animations](#)
- [CSS sprites](#)
- [Pseudo classes](#)
- [Grid systems](#)
- [Semantic markup](#)

In addition to these concepts, know about CSS preprocessors like [SASS](#) or [LESS](#) and their benefits. Also be familiar with CSS naming conventions like [BEM](#) and [OOCSS](#).

Another important point is that interviewers look for candidates who champion CSS best practices. As a good reference, this [guide](#) written by a front-end at Medium provides insight into how Medium iterated to their current CSS architecture.

I mentioned earlier that some interviewers will ask you to recreate layouts in HTML and CSS. Practice doing so in a playground like [CodePen](#). Check out [Dribbble](#) since it has lots of simple yet nice designs that would be fun to recreate.

Finally, as front-ends, we are so used to making changes in our editor and then verifying the change in our browser. Often times during interviews, you won't have this luxury. When you're preparing for your interview, try code most of your layout *without* looking at the result till the end.

. . .

Javascript Concepts

If HTML and CSS are the bread and butter of front-end development, then Javascript is the knife. Companies will spend a good amount of time during your interview testing your knowledge of Javascript. A lot of the questions will revolve around the following concepts.

- [Prototypal inheritance](#)
- [Scoping](#)
- [Closures](#)
- [The event loop](#)
- [Event bubbling](#)
- [Apply call and bind](#)

- [Apply, call, and bind](#)
- [Callbacks and promises](#)
- [Variable and function hoisting](#)
- [Currying](#)

When given a Javascript question, figure out which of these concepts you're being tested on and it'll be much easier to figure out the right solution. If you feel confident of your Javascript prowess, test your knowledge [here](#), [here](#), and [here](#).

. . .

Design Patterns

Design patterns in Javascript provide you with repeatable solutions to common problems. These are a few of the design patterns that are important to know.

- [Decorator](#)
- [Factory](#)
- [Singleton](#)
- [Revealing module](#)
- [Facade](#)
- [Observer](#)
- [MVC](#), [MVP](#), [MVVM](#)

Asides from Javascript design patterns, it's good to be familiar with Javascript frameworks. This does *not* mean that you have to go learn another framework before your interview. Instead, know *when* and *why* front-end teams use frameworks. Also, if you're interviewing for something like a React + Flux or an Angular position, review some of the documentation for the architecture of the framework beforehand.

Computer science concepts

Some companies hire software engineers before front-end developers. What this means is that these companies expect you to be well grounded in topics like good software design principles, scalable code architecture, and testing.

If your recruiter suggests you review your knowledge of data structures and algorithms, this section is for you. *Otherwise, feel free to skip this section.* If you don't have a computer science background, that's okay. Most of these concepts are pretty straightforward to learn.

Data Structures

These are the basic data structures that I would suggest knowing off the top of your head. Don't just read about them, take the time to implement them in Javascript as well. If you're not familiar with unit testing, test your data structure with a library like [Mocha](#) to learn.

- Linked lists
- Hashtables
- Stacks and queues
- Trees (binary trees and heaps)
- Graphs

Note: For graphs, also know how to implement depth-first and breadth-first search traversals.

For implementations of these data structures, you can take a look at [SanFoundry](#). All their examples are in Java but re-implementing them in Javascript is pretty easy.

Sorting

Once you feel confident about data structures, you can move onto sorting. Go through the list, implement them in Javascript, and then make note of their time and space complexity.

- Binary search
- Bubble sort
- Insertion sort
- Merge sort
- Quick sort
- Selection sort

After reviewing data structures and algorithms, test your knowledge with [Leetcode](#) and these [technical Javascript questions](#).

Wrapping it up

I know it's a lot of material to take in, especially if you're new to front-end development. Start preparing for your interview ahead of time, so you can move at a comfortable pace.

Also, remember that interviews are not a measure of your worth as a programmer. Some people are good at interviews, other are not. Sometimes you click with your interviewer, other times you don't.

If you have any questions, feel free to leave a note or [Tweet](#) out to me. I would also **love** to know how your interview experience went. Good luck!

P.S. If you liked this article, it would mean a lot if you hit the recommend button or share with friends.

If you want more, you can follow me on [Twitter](#) where I post non-sensical ramblings about design, front-end development, bots, and machine learning.

Front End Development

Web Development

JavaScript

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5.5K claps



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Jonathan Z. White

Designer & developer |
Writes about all things to
do with building products
|
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Hüseyin Polat Yürük
May 15 · 5 min read



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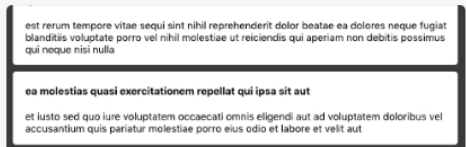
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Responses



Write a response...

Conversation between [Mike Boardley](#) and [Jonathan Z. White](#).



Mike Boardley

May 9, 2016 · 1 min read

In my years of experience, I've yet to see the computer science piece asked in an interview. I guess it would depend on the project.

There seems to be 2 paths that lead someone to the position of Front End Developer.

Path 1: Designers who learned HTML, CSS, light on JS now learning Angular.JS...

[Read more...](#)



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1 response



Jonathan Z. White



May 9, 2016 · 1 min read

You hit the nail on the head. As the systems that we have to design for become more complex, the skill set that front-end developers have to have increases.

Not all of these computer science concepts are necessary to be a front-end developer. However knowing them is helpful. Rarely would a front-end developer need to...

[Read more...](#)



Conversation between [calvinalibra](#) and [Jonathan Z. White](#).



[calvinalibra](#)
May 8, 2016

Also, remember that interviews are not a measure of your worth as a programmer.

That line right there is very important to remember. A bad interview will have you second guessing your entire career choice. This was a great read and I definitely recommend this!



1 response



[Jonathan Z. White](#)
May 8, 2016

Absolutely. I have some friends who are brilliant designers and developers but have gotten rejected after interviews. Glad you enjoyed the article!



Conversation between [Alex Homer](#) and [Jonathan Z. White](#).



[Alex Homer](#)
May 15, 2016 · 1 min read

If I were trying to get my first front end job I would focus almost all of my time just learning JavaScript fundamentals. If you can show real understanding of JavaScript you be fine. Be able to explain what hoisting is, what closures are, how promises work, different ways of iterating, ES6 features, and prototypical inheritance and you should be...

[Read more...](#)



1 response



[Jonathan Z. White](#)
May 17, 2016

This is sound advice. I always recommend people checking what kind of questions they will get interviewing as a front-end via a site like Glassdoor.

For a lot of front-end jobs, especially at small to medium startups, the emphasis is on Javascript fundamentals. So yea Javascript should be a huge focus during interview prep.



Conversation between [Firecode.io](#) and [Jonathan Z. White](#).





Firecode.io

May 3, 2016

This is a great article Jonathan. There are very few articles on front-end interviews—and Javascript is notorious for tripping a lot of candidates! Thanks!



1 response  



Jonathan Z. White

May 3, 2016

Exactly! Like I said earlier, there *are* resources out there but you wind up spending half your time hunting and compiling them all. Glad you found the article helpful.



Conversation between [Will Kempster \(kempsterrrr\)](#) and [Jonathan Z. White](#).





Will Kempster (kempsterrrr)

May 12, 2016

This is excellent, I am learning Front end / Javascript and I have been a recruiter in the same industry for 3 years. It is one of the most concise guides I have seen that I know first hand will help people nail tough interviews.

Brilliant piece :)



1 response  



Jonathan Z. White

May 12, 2016

Good luck with your foray into front-end development! It's great to hear that someone who has been in the recruiting industry for years agrees.



Conversation between [Divyansh Gehlot](#) and [Jonathan Z. White](#).




Divyansh Gehlot

May 3, 2016

Great article Jonathon! Thank you for taking your time and sharing this with the fellow hackers.



1 response  



Jonathan Z. White

May 3, 2016

No problem. Glad you enjoyed it.



Conversation between 林汶樺 | Askie Lin and Jonathan Z. White.




林汶樺 | Askie Lin

May 26, 2016

This is GREAT! Do you mind if I translate *this article* to Traditional Chinese? Thank you!



1 response  



Jonathan Z. White

May 26, 2016

I would absolutely love that. Please send me a link if you do!



1 response  

Conversation between Chris Billiau and Jonathan Z. White.



Chris Billiau

May 8, 2016

Jonathan, I am a complete programming neophyte who is currently engaged in a front/back end career-path program. From the perspective of coming into an interview as a 'green-handed' jr. developer looking for jr. developer work, where should I put my energies on the list? Is there a short-list of your list for the beginner?



2 responses  



Jonathan Z. White

May 8, 2016 · 1 min read

Glad you asked this question. I would suggest you focus on the first part of the article. So be sure to have a strong grasp of your HTML, CSS, and JavaScript fundamentals.

Also the biggest piece of advice I can give you is that developers need to show grit and passion. In particular, build up a portfolio of side projects...

[Read more...](#)



Applause from Jonathan Z. White (author)



Farrukh Umarov

May 11, 2016

Awesome write-up, thanks for sharing. I'm pretty sure a lot of front-end devs will follow these steps to get a dream job.



1



Applause from Jonathan Z. White (author)



Amit Panishap

Jun 22, 2016

Such a useful write up Jonathan. You never fail to impress!



1



Applause from Jonathan Z. White (author)



Abhinav Sharma

May 17, 2016

Great Article Jonathan. I have been through some horrible moments when I was staring the interviewer without having any idea about his question. Your article covers most of it all. Thanks for taking the time to share it with us.



1



Conversation with **Jonathan Z. White.**



Beverly McCaffrey

May 9, 2016

Even as one who is not in this field I can relate to the article and the information therein, that has to be a compliment...



1 response



Jonathan Z. White

May 9, 2016

That means a lot. Thank you!



Show all responses