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Market Update

Fixing the Broken Process for Hiring Software Engineers

The hiring process for software engineers is broken

It's detailed in an epic Reddit thread titled "Software engineer interviews are getting out of hand."

Over 200 comments have been made on the original post by Redditor superminer25, a software engineer who applied for a new job after working in the industry for six years. He chronicles how he made it through four one-hour interviews, a week-long (unpaid) take-home assignment, a 30-minute coding test, one rejection email, a puzzling invitation to apply for an entirely different position at the company, and then … got completely ghosted.

"How is this even legal?" superminer25 wonders in the final line of his Reddit post.

In a *Wired* story, a technical curriculum developer similarly laments that "trying to land a job in the tech industry" these days is "like being on *American Idol*."

Even people on the hiring side of the fence are saying the quiet part out loud: the process is indeed broken. On LinkedIn, the director of a UK engineering firm blasts companies for suddenly ghosting candidates after multiple rounds of interviews and technical assessments. "I'm sorry but this is crazy, unnecessary, and horribly anti-candidate," he writes.

While many software engineering candidates are unquestionably being put through the wringer, it turns out the traditional hiring process is a bust for employers, too: time consuming, costly, and shockingly ineffective.

The traditional tech hiring process is ineffective

In 2023, AWS surveyed 1,000 HR professionals in 10 countries who hire for in-demand tech roles in software engineering, data science, data analytics, and UX design. The findings revealed:

It takes an average of

7 weeks

to complete the hiring process for a technical role

More than one in four companies spend

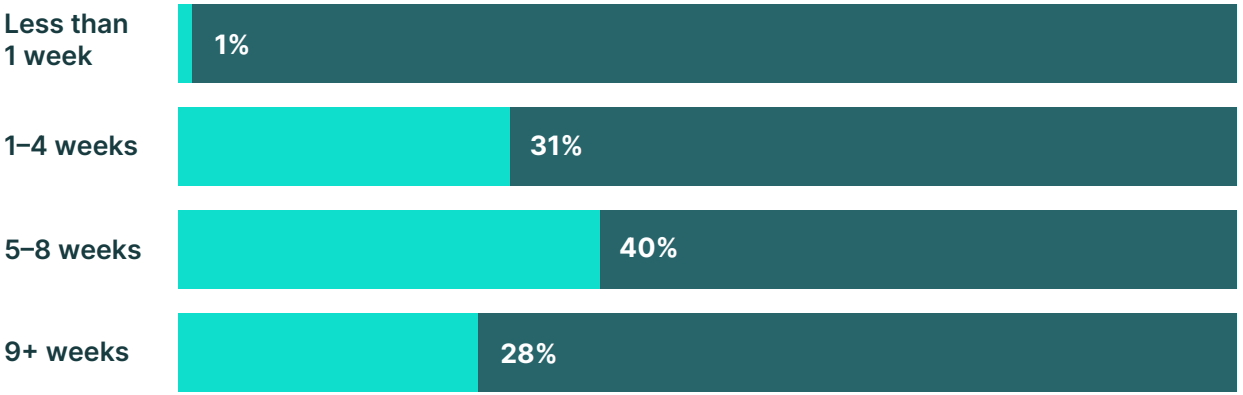
9+ weeks

recruiting and hiring for open technical positions

The average cost to fill one technical role is just under

$30K USD

On average, approximately how many weeks does it take your company to fill software engineering, data analytics, data science, and UX design positions?



"AWS/General Assembly State of Tech Talent Acquisition 2023"

On top of that, the process itself has a staggeringly low success rate. According to 400 tech hiring pros polled for the Linux Foundation's 2023 State of Tech Talent Report:

> **29%**
> **of new hires for fulltime permanent technical staff positions resign or are asked to leave within six months of being onboarded**

That means the hiring process for some of the most critical tech positions *ends in failure almost one-third of the time*.

"This is an astoundingly high metric and indicates that conventional approaches to recruiting and onboarding are not working," the Linux Foundation declared in its report.

Everyone knows the hiring process is broken. But why? And how do we fix it?

The problem with hiring interviews

The four hours of job interviews described on Reddit by superminer25 are part of a wider trend. The amount of time employers spent on hiring interviews nearly doubled between 2009 and 2019, according to Glassdoor research cited in the Harvard Business Review.

The catch is that not all job interviews are the same. In a 2016 study, Frank L. Schmidt of the University of Iowa found that most interviews don't predict the most suitable candidates because they're 'unstructured.' Here are the features of an unstructured interview:

- **no fixed format**
- **no fixed set of questions**
- **same interviewer asks different questions of different applicants**
- **no fixed way of scoring individual answers to each question**

Since unstructured interviews have no standardized framework, the candidates aren't assessed or compared to each other in a fair or consistent way. That's why hiring managers often end up, in Schmidt's words, rating each candidate "based on summary impressions and judgments" during the interview. In other words, highly qualified, extremely skilled software engineers are being hired (or not hired) based largely on *interview vibes*.

The unfortunate truth is that some software engineers get hired because they're incredibly skilled at giving great interviews — but not so great at the actual job.

"Doing a great interview that gets you into a company is a skill in itself. But you need to use different skills when you're *in* the company," says Jake Hoffner, Senior Director, Product Management at Andela.

In Harvard Business Review, Peter Cappelli dunks hard on companies that use unstructured interviews, writing that "just winging it and asking whatever

comes to mind is next to useless." He also points to research proving that unstructured interviews "are where biases most easily show up" in the hiring process. Instead, Cappelli calls for companies to move to 'structured interviews,' which are:

01 **Standardized for consistency across all candidates**

02 **Related to past job performance**

03 **Relevant to tasks and skills required for the posted job**

Let's go back to Schmidt's research; when he studied how well candidates performed in their new jobs *after* being hired, he discovered structured interviews are a much better predictor of job suitability than unstructured ones — especially when the company also conducts a competency test:

> **76%**
> **of the time, combining a structured interview with a GMA (general mental ability) test accurately predicted a candidate's suitability**

Although testing helps identify strong job candidates, only 40 percent of US employers test applicants for skills or general ability. (By comparison, 70 percent conduct drug tests.)

Skills testing alone can't fix the broken tech hiring process, however. We also have to phase out "useless," unstructured interviews for good. That's because *even when companies conduct skills tests, they ignore the results* and make hiring decisions based on (you guessed it) personality-based interview vibes. Scott Highhouse of Bowling Green University described this bizarre phenomenon in a 2008 research paper: "We found that the managers placed more emphasis on competencies assessed by unstructured interviews than on competencies assessed by tests, regardless of what those competencies were."

So, companies are ignoring hard data from competency tests because interview vibes are apparently just too hypnotic to resist. Highhouse suggests that in unstructured job interviews, conversational tangents overshadow relevant facts and data about an applicant's skills and experience: "The tendency to be seduced by detailed stories causes (interviewers) to ignore relevant information and to violate simple rules of logic."

There's a cost to this illogical folly, of course. Schmidt estimates that "by using (hiring) selection methods with low validity, an organization can lose millions of dollars in reduced production, reducing revenue and profits."

That's why the hiring process for software engineers is broken: it neglects or overlooks skills-based testing in favor of willy nilly interview vibes.

Now that we understand the problem, how do we fix it?

Fixing the broken tech hiring process

In *Jaws*, the police chief is being sarcastic when he tells the shark hunter "you're gonna need a bigger boat." After finally catching a glimpse of the shark, the chief realizes it'll take way more than a bigger boat to defeat the great white beast in the water.

Along the same lines, if we finally recognize that over-reliance on interviews has broken the tech hiring process, we can't fix it by making candidates do even more rounds of interviews. Instead, let's focus on what actually works: skills testing.

- **Pre-employment testing**, especially scenario or case study testing, is an effective way to validate that the candidate has a portfolio of relevant skills for the role they are applying for. (Linux Foundation)
- **Specific aptitude tests** are twice as effective as unstructured interviews in predicting a candidate's suitability for a job and their performance after being hired. (Highhouse)

With candidates balking at take-home assignments lasting days or weeks, it's time for testing that demands less time of the company and applicants, is more cost-efficient, and assesses skills that are truly relevant to the job.

But wait. Hold on one nanosecond. *Artficial intelligence is throwing a giant, clanking wrench into this entire thing.*

AI enters the chat

Seemingly overnight, a barrage of AI tools has sprung up to help frazzled job candidates during hiring interviews and skills tests. Not sure how to answer that tricky question from a hiring manager during your Zoom interview? An AI assistant will suggest an awesome answer to you in real time, *as your interview is in progress*.

One of these AI-based tools actually promotes itself online as suitable for job interviews for "highly technical positions such as software engineers." The website for the same AI assistant states that, during the interview process, it "can provide technical concepts, frameworks, and example code to help users compensate for their lack of technical breadth."

Need a hand completing that skills test or take-home assignment to advance to the next round of job candidates? AI, to no one's surprise, can even do that too.

"The ability is there to cheat so easily," says Hoffner. "Some hiring managers are wondering 'what am I even testing for now?'"

Any attempt to fix the broken hiring process will have to address the AI elephant in the interview and testing rooms.

Why Qualified by Andela really works

Enter Qualified.io from Andela. It's a platform where employers can assess candidates' software engineering skills through coding tests designed to meet real-world needs. Automated scoring takes the guesswork and long hours out of competency testing, whether your company is considering one candidate or thousands.

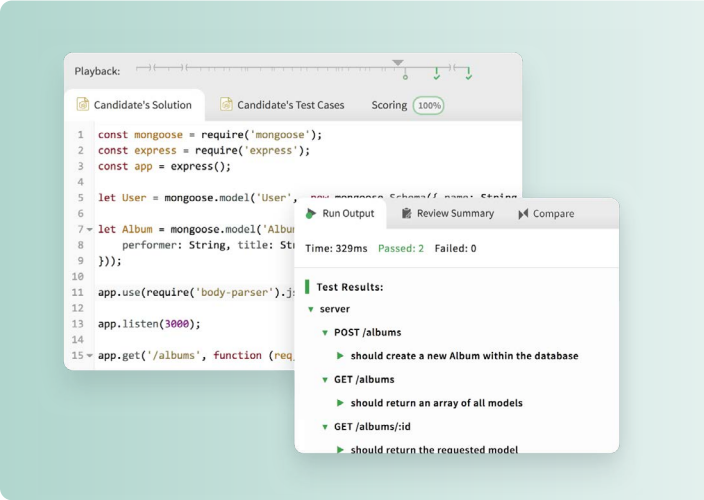
"You want to assess somebody in a way where what you're seeing is predictive of how they're going to work," says Hoffner, who co-founded Qualified in 2015. "Qualified is really built around the idea of making (hiring) performance-based by allowing candidates to solve the kind of problems they'd actually have to solve on the job."

Employers can choose from Qualified's standardized library of pre-built assessments or build their own customized tests to assess skills for specific needs and projects. Qualified's benchmarking statistics quickly compare the technical skills of all your job candidates against each other (plus software engineers worldwide) in a standardized way.

"The more you can create consistent reliability and objectivity in the process, the better," adds Hoffner.

Technical assessments can take as little as 20 minutes per applicant. (Though if you want to design a more comprehensive test to meet your specs, you can definitely do that on Qualified.) For convenience, replay video of any applicant's test on your own time to get a closer look at the quality of their coding, how they work, and the approach they take to problem solving.

"You can review a whole session in about five to 10 minutes," Hoffner notes. "An assessment process that allows you to objectively compare and understand how they write code and how they think — not just the ability to solve but the quality of the solution — is really powerful."



And Qualified helps detect when job candidates get AI assistance during coding tests. The Insights feature susses out abnormal coding patterns, while the code playback option makes it easier to spot if something fishy might be up.

"You're visually seeing them code, and the platform is recording every keystroke and event," Hoffner explains. "If their organic coding process suddenly takes an artificial direction, the system will flag it and you'll be able to review and see for yourself."

Some companies may *permit* job candidates to use AI or other tools during coding tests — and that's okay, too. In Qualified, hiring managers can include "an honor code" a section for disclosure and transparency, explaining to candidates whether they're permitted to use tools during a test, and if so, providing a section where they can disclose that beforehand.

"Telling candidates what they're allowed — and not allowed — to use as tools during the assessment, and having them commit to those rules, actually goes a long way. Few are willing to risk their opportunity if they realize they'll get caught, and many just don't want to be unethical," says Hoffner.

Apple, Facebook, GE, Klarna, and Zoom have all used Qualified to find the best engineering and/or developer talent. Qualified was built by the same team behind Codewars, the platform for engineer training and coding challenges that now boasts a community of over five million developers. Qualified is continually updated and improved to reflect the latest coding formats and languages used today based on feedback from over one million developers. Qualified is baked into the AI-powered Andela Talent Cloud yet can also be used on a standalone basis, whatever fits your needs.

Don't miss out on talented software engineers who lack the traditional career pathway to grab recruiters' attention but *do* have the technical chops to get your job done. Stop relying too heavily on endless rounds of gruelling, unreliable interviews. According to Hoffner, Qualified is often used to complement hiring interviews: many companies use it to screen for competency early on, then narrow down who to interview later.

"There's this bias that creeps in based on how likable somebody is in an interview. Qualified was built to remove a lot of the bias from the hiring process," he says. "Qualified can make your interviews better because you can talk to the candidate about their assessment and build upon it in their interview: how would you do this differently or what if we added this requirement? You can look at their code (assessment) and treat it like a portfolio."

It's time to leave the broken hiring process behind.

"It's about removing the bias and considering a larger pool of talent," Hoffner explains. "It's creating a more objective process that doesn't make candidates feel like they're being asked to jump through hoops."

To hire the best software engineering talent based on the skills your business needs to compete in real life, contact Andela and explore Qualified today.