

Optimizing Your Tech Hiring Practices

The Experts' Guide to Increasing Diversity on Engineering Teams

Introduction

Today, more and more companies are recognizing the value that employees from diverse backgrounds bring to an organization as they scale their technical teams. A recent study found, for example, that companies that are racially and ethnically diverse outperform industry norms by **35 percent**¹. Engineering teams, however, are often the least diverse teams in an organization—in large part because technical recruiting still relies heavily on bias-laden methods like resume review and traditional interviews to identify top candidates.

This has been going on since the mid 1990s, when the need for technical talent started growing rapidly. Most companies still rely on traditional resumes and interviews, which introduce a lot of subjectivity. I experienced this first hand. After graduating from MIT, I was chased by recruiters from all over the country and landed at Google. Meanwhile, Aram Shatakhtsyan (who would later become one of CodeSignal's co-founders) had much stronger technical skills than me – but not the same resume – and faced an uphill battle landing his first software engineering job. This isn't right.

Fortunately, there's a better way.

This guide brings together proven strategies from leaders in engineering and talent acquisition at industry-leading companies for reducing bias in your hiring and increasing diversity on your engineering team. From opening up the top of your recruiting funnel using validated skills evaluations, to conducting structured interviews that reduce bias, you'll learn concrete actions you can take to move the needle on diversity, equity, and inclusion (DE&I) initiatives at your company.



Tigran Sloyan CEO & Co-founder @ CodeSignal

¹Why diversity matters | McKinsey

Engineering leaders on building a diverse team

What companies should (and shouldn't) do to improve racial diversity on their engineering teams



Jehron Petty, Founder & CEO @ ColorStack

As the Founder and CEO of a nonprofit organization, ColorStack, I've gained a unique perspective on what the Black and Latinx Computer Science graduates we support at ColorStack are looking for in the companies they're applying to. I've also seen how the tech companies we partner with are implementing diversity, equity, and inclusion (DE&I) initiatives and the challenges they've faced.

Here's what I've learned about what companies can do to not just hire, but also retain, exceptional Black and Latinx software engineers to build racially diverse engineering teams.

- **O1. Startups, start thinking about diversity early.** It's much easier to be the first Black hire at a 5-person startup compared to a 500-person company. What a company looks like in its early stages, in terms of employee demographics, often predicts what that company will look like in the future. That's because networking and referrals play such a large role in a company's growth early on, and social networks tend to be racially homogeneous. <u>One study</u> found that for White Americans surveyed, over 90 percent of people in their social networks were also White, on average. If your startup is made up primarily of White employees, chances are high that the candidates they refer will also be White.
- **O2.** Offer remote work options. Many US tech hubs are in locations with predominantly White populations, like San Francisco, and may not be attractive places to relocate to for Black and Latinx software engineers.

Many ColorStack students I've talked to are interested in companies that offer remote work because this would allow them to work and live in the communities where they've grown up and feel more comfortable.

- **O3.** But, provide in-person onboarding experiences. Connecting with colleagues over tools like Zoom and Slack can be intimidating for Black and Latinx early-career developers, who may have less familiarity with the culture of tech than their White counterparts. Providing new hires who work remotely with an in-person onboarding experience can reduce feelings of isolation and help developers of color network effectively.
- **O4.** Remember that diversity and inclusivity go hand-in-hand. As your company starts to hire more employees of color, keep in mind that most new hires don't want to be the first or only person at your company who looks like them. Consider investing in internship or university recruiting programs that bring in a diverse cohort of new hires at the same time—while also, to the extent possible, supporting these new hires with a racially diverse group of mentors and employee resource groups (ERGs). This will help establish a culture of support and inclusion among new hires from backgrounds that are underrepresented in tech.
- **05. Hire diverse talent at all levels.** To hire and retain talented early-career Black and Latinx software engineers, it's important for companies to hire diverse talent at all levels—not just junior-level. The students I work with through ColorStack value working with mentors who share their racial identity and can relate to their experience, and are looking to work at companies whose executive teams include Black and Latinx people. Otherwise, they may see their opportunities for growth at your company as limited. And in fact, I've seen this prevent students from even applying to certain roles.
- **06.** And, share that information publicly. Lastly, new grad Black and Latinx software engineers today want to know the racial and gender composition of the companies and teams they're applying to—these numbers speak louder than stated commitments to DE&I. Unfortunately, less than half of Fortune 500 companies share race and ethnicity information publicly, with only 22 companies publishing full employee racial and ethnic demographic breakdowns. Sharing this information transparently is a great step toward addressing the problem and gaining the trust of Black and Latinx candidates.

These are just six ways I've observed that tech companies can start to improve the racial diversity of their engineering teams. The good news is—any one of these is a great place to start. And, an amazing strength of tech companies today is their ability to make decisions using data. When you apply this data superpower to measuring and tracking progress for your diversity initiatives, you're well on your way to making meaningful change at your organization.

<u>ColorStack</u> is a 501(c)(3) nonprofit with the mission to increase the number of Black and Latinx Computer Science graduates that go on to start rewarding technical careers. Launched in 2020 and led by Founder <u>Jehron Petty</u>, a 2020 Computer Science graduate from Cornell University, ColorStack has become the #1 place for Black and Latinx college Computer Science students to find community, academic support, and career development. No matter what school they attend.



Use these technical interview strategies to build a more diverse team

Michael Newman, VP of Engineering @ CodeSignal

You've invested a lot of work into sourcing candidates from diverse backgrounds for your team—but the candidates getting offers don't seem to reflect the diversity in your pipeline. If that sounds familiar, you're not alone—it's a common frustration. If you don't evaluate fairly, you won't end up with the results you want, no matter how much effort you put into sourcing. You need to evaluate your strategies for promoting equity at every stage of the hiring process, and interviewing is often where unconscious bias has the most opportunity to sneak in. Building diverse technical teams doesn't stop with the talent acquisition team: as engineers, it's our responsibility to create teams that reflect many perspectives. Over the years as an engineer and a manager, I've conducted hundreds of technical interviews and coached many engineers on how to conduct interviews. Based on that experience, I've learned that structured interviews, job relevance, and progressive questions are key measures for mitigating bias in technical hiring.

Types of bias that can occur during technical interviews

No one likes to think that they are biased, and yet we all have unconscious bias that can affect how candidates are evaluated during an interview. Some examples are:

• **Confirmation bias:** This happens when you look for information about the candidate that supports what you already believe to be true. For example, suppose you are interviewing a candidate and you worry that their resume shows a lack of system design experience. You might unintentionally ask them harder system architecture questions than you gave other candidates.

Halo effect: Sometimes, one positive aspect of the candidate can cast a glow on the rest of their performance. It could be anything from their bright smile to their description of their volunteer work at a coding school. Without realizing it, you might overlook the fact that a candidate struggled through the technical interview questions.

Affinity bias: When you have something in common with a candidate, it's harder to be an objective interviewer. From a diversity perspective, this creates a vicious cycle where candidates who are similar to the people who already work at your company are more likely to receive high marks in an interview.

Conservatism bias: Humans tend to "anchor" on evidence that's presented first, and we're slow to update our beliefs when new information comes to light. This is why we so often talk about the importance of a first impression! However, it's essential that interviewers assess a candidate's performance as a whole.

Before you say, "that's not me," we also all have what's been called a bias blind spot: studies have shown that the majority of people believe their own bias is less than others'.

How to remove bias from technical interviews

There is no way to remove bias from technical interviews entirely without removing humans. And human interaction is still important in the interview process. You might end up working together for a long time, so you want a chance to get to know each other!

Fortunately, there are ways to mitigate the bias pitfalls described above. Encourage your hiring teams to practice consistent, repeatable methods for developing and conducting a technical interview. Interviewers will still be a key part of the process —they'll just have a method for being more objective when it comes to evaluating whether the candidate is qualified for the job.

Here are 3 practices your team can implement to reduce bias in technical interviews:

Structured interviews

1

Structured interviews use a consistent set of questions and evaluation metrics across candidates. Research has shown that structured interviews allow employers to better predict how candidates will perform on the job. And, an objective and consistent interview process reduces bias in hiring.

To create a structured interview, start by deciding what skills the team wants to measure, and then develop questions that all interviewers will use to measure those skills. This ensures that interviewers are not improvising, unintentionally giving some candidates harder or easier questions. Apply this structure to the whole interview: Make sure that the order of the questions remains consistent, and train interviewers to ask each question the same way and give the same hints or prompts to every candidate.

2 Job-relevant questions

To avoid unintentional bias, it's important to keep questions focused on real, on-the-job skills. This will ensure that candidates aren't hired based on how much time they had to study algorithm brainteasers on forums like LeetCode.

Another trap to avoid is asking interview questions that assume particular cultural knowledge, which might not be common knowledge for everyone. For example, I've seen a hiring team using a question centered around stats for a baseball team—sounds innocuous, right? Unfortunately, many non-American candidates struggled to understand the question because baseball wasn't part of their cultural awareness.

Avoid these pitfalls by keeping your questions as close to your real work as possible. Try basing questions around simplified versions of problems your team has encountered in their own work.

Progressive questions

3

The order of questions in a structured interview is essential. Ideally, use one scenario with multiple stages that progress in complexity from easy to hard. This lets the candidate experience a small success right away, boosting their confidence and creating a consistent, positive "anchor" for every candidate. This kind of question can be used across a range of experience or skill levels, since you can use the same scenario and adjust based on how far the candidate gets.

Progressive questions that build on one problem are also inherently more realistic. In real life, code is constantly evolving. Engineers must take their initial solution and continue modifying and adapting it as business needs change. So, asking them to do the same thing during an interview simulates what they're used to doing on the job. Asking this kind of realistic question helps keep an interview focused on evaluating a candidate's job-relevant skills—rather than biased and unreliable proxies for skill. Technical interviews may never be totally free of bias, but there are best practices you can implement to reduce and mitigate human bias. These include: learning and recognizing the types of unconscious bias that impact hiring; implementing structured interviews; asking job-relevant questions; and using a progressive question format. By taking these steps to build a fairer process, you'll position your organization to make better hiring decisions with less bias.

How technical questions can introduce bias—and what you can do about it



Peter Lu, VP of Solutions Engineering @ CodeSignal

Here at CodeSignal, we've seen first-hand the value of objective skill evaluations in reducing bias and increasing diversity in technical hiring. Because skill evaluations allow candidates to show what they can do, hiring managers who use tools like CodeSignal no longer need to rely on proxies, like where a candidate went to school, to identify top talent. This has allowed our customers (and, of course, our own hiring teams) to consider a more diverse pool of applicants rather than limiting their search to candidates from the most prestigious schools or the biggest-name past employers.

However, just using assessments isn't enough to minimize bias in hiring. You also have to make sure you're using a tool that's unbiased. The first step is to create effective technical questions using examples that are job-relevant and unbiased.

What makes for an effective technical question?

Let's start by defining some key terms.

• **Technical questions**, of course, are the building blocks of your assessment. Technical assessments often consist of 2-3 coding questions and, in some cases, a series of quiz questions.

Job-relevant means that the content of the assessment is clearly connected to the responsibilities and requirements of the job. Job-relevance is also a foundation of valid hiring assessments. This means that the exact definition of "job-relevant" will vary by industry and by company. Candidates for a mobile developer position, for example, may be asked to build a mobile app using React during a technical interview; similarly, candidates for a senior engineering manager position in the financial industry may be expected to know something about how the stock market works.

Role-specific questions use examples that the candidate might encounter in the role they're applying for. Role-specific questions, most commonly used for assessing senior-level candidates, go beyond the standard of job relevance to provide candidates a simulation-like experience of the job they're applying for. They offer hiring teams a valuable glimpse of how a candidate might perform on the job.



Take, for instance, the ubiquitous FizzBuzz coding challenge (a common solution in Python is shown below).



This question asks candidates to write code that, given a series of numbers, outputs the text, "fizz," "buzz," or "fizzbuzz," depending on whether a number is a multiple of 3, 5, or both. Is FizzBuzz job-relevant? Most likely, yes; it tests a developer's ability to problem-solve and produce functional code. However, the FizzBuzz challenge is not role-specific because it doesn't realistically simulate the work the candidate would be doing on the job.

Lastly, unbiased means that the question does not unfairly advantage one group of people over another, assuming both groups have the job-relevant skills needed to solve the question. A biased question, on the other hand, may give one group a leg up by referring to culturally-specific background knowledge, like the rules of baseball.

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Avoiding biased examples

Bias, in the context of hiring practices, occurs when the assessment discriminates on characteristics that are not relevant to job requirements—such as when the content fails to capture important aspects of the job or has nothing to do with the job. This becomes a problem when job-irrelevant content negatively impacts the scores of some groups more than others.

So what does this have to do with coding questions, and how can these be biased? Coding questions, even when they test job-relevant skills, often use examples that have nothing to do with the job. Take FizzBuzz—it allows candidates to demonstrate their ability to produce working code. But the example it uses is arbitrary. What company needs a software engineer who can write code that produces "fizzes" and "buzzes?"

Another popular question, often called "buy and sell stock to maximize profit," uses the example of the stock market. A Stack Overflow user describes the problem like this:

You are given the stock prices for a set of days. Each day, you can either buy one unit of stock, sell any number of stock units you have already bought, or do nothing. What is the maximum profit you can obtain by planning your trading strategy optimally?

While many hiring teams have found this problem useful for assessing developers' coding skills—unless you're hiring for a role in the financial industry, the example in this question is probably unrelated to the role. And, depending on the question description you provide to the candidate, the example may be biased. Imagine, for example, being asked to complete this question without having basic familiarity with the stock market. Could you do it?

To avoid using examples that introduce bias into your assessment, ask yourself these questions:

What job-relevant knowledge, skills, or abilities does this question assess?
What background knowledge does the candidate need to understand this question?
Is the required background knowledge relevant to the job, company, or industry?
Lastly, how do different subgroups (along lines of race, gender, national origin, etc.) interpret this question? To address this question, it can be useful to solicit feedback on your coding questions from a diverse pool of colleagues or engage assessment design experts in developing your technical assessments.



Conclusion

Designing valid and fair technical evaluations is no small task. Bias can be hard to spot, and we're often not even aware of the biases we hold. But by developing job-relevant and even role-specific questions, hiring teams can start to minimize bias in their skill evaluations—crucial to identifying candidates who have the skills needed to succeed on the job.

Even better is engaging a team of assessment design professionals to help you design and validate your skills evaluations. The experts at CodeSignal's Skills Evaluation Lab would love to talk with you about designing effective interviews and assessments that reduce bias and increase diversity on your technical teams.

Talent acquisition leaders onmeeting DE&I goals for tech hiring

5 steps for developing a successful DE&I tech recruiting initiative

Sophia Yamauchi, Emerging Talent Programs Manager @ Asana



In my work at Asana, I have helped lead a unique and highly effective apprenticeship program called AsanaUP that creates opportunities for people from underrepresented backgrounds. AsanaUP is a development program aimed at hiring exceptional people who are entering or reentering the professional tech environment from nontraditional and underrepresented backgrounds. Participants of AsanaUP, called apprentices, operate within various teams at Asana for a fixed term while receiving mentorship and personal and professional development from a broad set of employees.

To date, our program has brought on over 75 apprentices and is now in its 6th cohort of engineering apprentices. AsanaUP has a success rate of 82 percent when it comes to converting apprentices to full-time software engineering roles.

Here's what I've learned about running a successful DE&I initiative from my experience with AsanaUP:

O1. Start with your why

When advocating for DE&I with other stakeholders in the business, think about how it aligns with your core values and goals as an organization. At Asana, for instance, our mission is to help humanity thrive by enabling the world's teams to work together effortlessly. In order to fulfill this mission, it's imperative that we build a diverse team that's representative of the customers we support each and every day. Your program mission doesn't have to align perfectly with your company mission — it just has to set a north star for what you're trying to achieve in creating opportunities for people from nontraditional, underrepresented communities.

02. Gain support from your leaders, your managers, and your mentors

A program like AsanaUP takes a village to succeed. Each AsanaUP apprentice gets a support team consisting of a manager, a mentor, and an additional team member. In addition to 1:1 mentorship, apprentices can lean on groups outside of their team, like Employee Resource Groups (ERGs) and the AsanaUP alumni. The program also organizes lunch-and-learns and ongoing sessions on topics like dealing with imposter syndrome, how to network, and how to ask for help.

To foster this kind of community, it's really important to find the people that are really excited about investing their time and putting forth the effort to help those who are trying to break in from nontraditional backgrounds.

03. Partner with organizations that are already doing the work

A frequently-cited challenge with implementing DE&I initiatives is the pipeline: how do you get the right candidates into the program? One way is to seek out organizations that are already investing in upleveling and upskilling the kinds of individuals your company is hoping to connect with.

AsanaUP has partnered with the <u>Marcy Lab School</u> and <u>Year Up</u>, two organizations that are very intentional about closing the opportunity gap in tech. The Marcy Lab School provides rigorous but affordable college alternatives to propel underestimated young professionals to a rewarding career in tech. Year Up's mission is to close the opportunity divide by ensuring that young adults gain the skills, experiences, and support that will empower them to reach their potential.

04. Put structure in place to create equal opportunities to succeed

Partnerships are one way to create structure around your program, and it's important to introduce structure to your hiring funnel as well. At Asana, we use CodeSignal at the entry-point of our interview process to ensure that we're fairly evaluating candidates based on their skills rather than their pedigree. This includes taking a look at how we're setting the minimum threshold score for the technical assessment portion of the interview. We don't expect that our apprentices are meeting the same bar as candidates that have a 4-year CS degree, for example.

05. Make sure everyone is aligned on what success looks like

A final secret to AsanaUP's 82 percent conversion rate is setting clear goals for apprentices and their support teams. Every apprentice will walk through a success guide with their manager which will outline the criteria and competencies needed to convert to a full-time role.

Apprentices have the opportunity to request feedback anytime, but the program also provides frequent rounds of structured feedback. We look at how apprentices have made an impact, areas for growth and improvement, and if they are on track — and if not, what can we all do as a team to help them get there. It's a two-way conversation, so apprentices can share their feedback on their experience as well.

How to set meaningful DE&I goals and measure progress



Ariana Moon, Director of Talent Acquisition @ Greenhouse

This chapter draws from Data-Driven Recruiting Episode 65, where Ariana Moon, Director of Talent Acquisition at Greenhouse, talks with CodeSignal Co-Founder Sophia Baik about setting and monitoring DE&I goals for your company, department, and team.

Sophia Baik:

DE&I professionals that I've spoken with often say it's really hard to use data when it comes to showing progress in DE&I at a company. How are you using data to monitor your teams, how you're progressing, and how you're achieving the goals?

Ariana Moon:

There are two main ways that we look at demographic data. One is through an HRIS [Human Resource Information System]. This is helpful for answering questions like: What does the demographic breakdown of our current employees or employees over time look like? What have our trends been?

The second way is on the candidate side. This is helpful for answering questions like: What is the conversion rate of various demographics in our hiring funnel? What are the trends we're seeing there?

I think you need both perspectives to track the progress you're making towards your company-specific DE&I goals. Even if you have a robust and diverse candidate pool and you have diverse new hire classes, you need to have the full picture of who's onboarding successfully and staying at your company. Is there one demographic group that's attriting disproportionately to others? This can often be the case for people of underrepresented identities. Because they're already a minority, the feeling of belonging or inclusiveness at a company can be more challenging to find. That's the stuff that really impacts someone's engagement and success in a role long-term.

The challenge here is that it's really hard to quantify and it can be hard to see. But, it's just as important because no matter what you do on the talent acquisition side to hire as inclusively as possible, if you're not creating an environment where anyone—regardless of their ethnic or racial identity, gender, sexual orientation, ability status, etc.— can succeed in equal ways, you're going to have challenges with engagement and retention.

That's the high level of how I think about using data for tracking DE&I goals. At Greenhouse, we started reporting on company-wide demographics not long ago, and it's our commitment to provide updates on a quarterly basis.

On the hiring side, we obviously use our own software. So any time we want to have a conversation with our hiring managers or executives about the demographics in our hiring pipelines, we can pull this up within a few clicks of a button.

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There are so many tools these days to help leaders track their success and progress with DE&I. If that's not something your organization does yet, there's a chance that you'll be behind on this conversation. Organizations are now embracing the ability to track this data and share it with their employees in anonymized and appropriate ways so that they can understand, are we actually making meaningful progress towards diversifying our organization?

SB:

Yeah. Before you set a goal, you need to know what your current state is, right? Then you can say, "This is the area that we want to improve."

You mentioned that you also break down this number by department. Has one department been more challenging in terms of having more diverse representation than others?

AM:

That's a great question. The short answer is yes. I think there's a combination of things that are happening. Certain jobs or occupations tend to have certain majority demographic trends tied to them. For example, I was researching the average percentage of women in software engineering roles in the US. Different sources say different things depending on how you slice the data—but it's a pretty sobering number. It's about 15 percent women.

That's a very common challenge for more technical occupations. I also see this pattern in enterprise software sales. However, if you're hiring for a People team, there is usually more non-male talent available and in a given pipeline. So, the challenge is flipped.

When it comes to the team that you're hiring for, you should keep in mind both the company view and a team-specific view on what diversity looks like. Meaning, first take into consideration your company-wide DE&I goals.

Then, look at the makeup of your team and ask yourself, "when I look at this particular team and the department it sits in, where are our opportunities to increase certain areas of diversity?" The challenge here is that there are so many important ways to define "diversity." When you take intersectionality into account, everyone has their own unique version or a package of experiences. So categorizing people can sometimes feel a little icky. But it's a starting point.

Also, when you're thinking about a DE&I strategy, it's important to pick and focus where you want to apply your resources, because the reality is that many companies have limited resources to dedicate to DE&I initiatives. Things like investing into diversity sourcing for hiring or creating an equitable onboarding and performance management process are hefty, meaningful initiatives—and while we might want to tackle it all at once, we have to remember that we can do anything, but not everything. So, it's equally as important to focus on what your DE&I goals center around. Then from there, stick with that goal long enough for you to measure actual progress and iterate along the way.

Why IO Psychologists are essential to creating a tech recruiting process that minimizes bias



Sylvia Mol, IO Psychologist & Assessment Research Lead @ CodeSignal

Today, 93 percent of leaders agree that diversity, equity, and inclusion (DE&I) is a top priority for their organization, but only 34 percent view it as a current strength in their workplace. Most tech companies struggle to increase the diversity of their engineering hires, in particular.

Building unbiased technical assessments that empower companies to reach their DE&I hiring goals is the core mission driving our work at CodeSignal's Skills Evaluation Lab.

What is the Skills Evaluation Lab?

The Skills Evaluation Lab is made up of CodeSignal's teams of PhD Industrial-Organizational (IO) Psychologists and Assessment Design Engineers. Together, these teams develop, validate, maintain, and ensure compliance for CodeSignal's Tech Screen and Pre-Screen assessments, as well as coding questions for live interviews.

The Skills Evaluation Lab is also responsible for developing the Skills Evaluation Frameworks that power CodeSignal Pre-Screen and Tech Screen. These frameworks are built from a research-backed set of requirements and guidelines that enable companies to consistently identify qualified candidates for their roles. Skills Evaluation Frameworks support question variations at scale, which mitigates the impact of leaked questions—a common and unavoidable occurrence in tech hiring—by ensuring that no two candidates see the same series of questions. IO Psychologists continue to monitor the assessments to ensure questions are of equal difficulty, accurately measure critical skills for the role, and are defensible against adverse impact.

What is IO Psychology?

Industrial-organizational (IO) Psychology is the scientific study of human behavior in the context of work. IO Psychologists like myself work to improve all aspects of the workplace for both the organization and the employees—which is especially important as more companies strive to improve diversity, equity, and inclusion (DE&I) in their hiring practices.



What does the Skills Evaluation Lab do?

O1. Performs job analyses to understand different engineering roles

Job analysis is a scientific approach to measuring and understanding the responsibilities required for a given role at an organization. By using science rather than gut instinct or opinion, teams can help reduce bias in hiring practices and make sure that qualified candidates aren't deterred from applying.

When CodeSignal's IO Psychologists conduct a job analysis for our customers, we think through the KSAOs: knowledge, skills, abilities, and other characteristics that allow people to succeed. We also seek input from a representative sample of a customer's employees that can adequately reflect the diverse perspectives and experiences on the team. Then, we help the customer use the output of the job analysis to add structure and consistency to recruiting practices. This support ranges from writing the job description, to training the interviewers on what is job-relevant, to ultimately selecting or building a selection tool that is defensibly jobrelevant.

The foundation of having a clear job analysis helps organizations create accurate job descriptions and leverage defensible assessment and interview questions. This provides transparency to candidates and helps recruiters and hiring managers ensure that they are focusing on only job-relevant criteria when evaluating candidates' suitability for a role.

O2. Develops & validates coding assessments that predict on-the-job performance Using pre-employment assessments can be a powerful DE&I strategy. When assessments replace something like a phone screen or human resume review, it's much harder for human bias to be introduced at that stage. Here at CodeSignal, we know from decades of research that most people tend to be overconfident in their ability to make fair hiring decisions. Rigorously designed assessments help to ensure that all candidates, regardless of their background, are being provided the same opportunity to demonstrate their fit to the role.

03. Builds structured interviews to minimize bias & increase diversity

Without a data-driven and structured approach, interviews are left open for human bias to creep in. It's natural and expected for interviewers to want to form connections with the candidates. But as soon as an interviewer starts asking the question differently, providing more guidance towards one candidate over another, or giving a candidate the benefit of the doubt when scoring, they are changing the assessment and how candidates are impacted.

Our Skills Evaluation Lab can help teams bring structure to coding interviews. Depending on a customer's needs, this might include:

- Creating and reviewing an approved set of questions and explaining
 - how they tie back to important aspects of the role
- Explaining how to create and use rating scales for each question, or
- Explaining common biases to be aware of and strategies for removing them from the interview and scoring process.

These principles and best practices from IO Psychology are valuable in setting a strong foundation for people processes that are backed by science, therefore reducing subjectivity and the potential for human bias in the interview process.



Conclusion

This guide has presented a variety of strategies companies can use to increase diversity on their engineering teams. To do this successfully, both talent acquisition and engineering teams need to be involved and implement best practices for technical hiring at all stages of the recruiting funnel. Here are the top 5 takeaways from the engineering and talent acquisition leaders included in this guide:

- **O1.** Open up the top of the recruiting funnel using validated skills evaluations. A tried-and-true way to open up your technical hiring to a more diverse talent pool is to replace resume review at the top of the funnel with objective skills assessments. Done well, skills assessments help identify top technical talent early in the hiring process while saving time for your engineering team and moving candidates through the hiring process more quickly, which improves their candidate experience and increases the likelihood that your offer will be accepted.
- **O2.** Implement structure and consistency in your hiring interviews. Interviews provide both hiring teams and candidates with valuable information about how each party collaborates and problem-solves on the job. However, they're also rife with potential for human bias to creep in—whether it's through how coding questions are written, how interviews differ from candidate to candidate, or how different interviewers assess a candidate's competency. Structured interviews, conducted consistently across all candidates for a role, help mitigate bias by giving all candidates access to the same interview experience and a standard set of requirements against which they'll be evaluated.
- **O3.** Create and track measurable tech hiring initiatives around DE&I. It's a common saying in the business world that "what gets measured gets done." This holds true for initiatives around diversity, equity, and inclusion in technical hiring, as well.

Engineering and recruiting stakeholders should work together to define what "diversity" means to them and decide which metrics, such as employee demographic data, to track. Tracking and measuring DE&I initiatives should hold the same level of importance as other strategic initiatives at your company.

- **O4.** Scrutinize your own hiring processes for potential bias. None of us is free from bias, and even the most carefully-designed hiring processes can inadvertently harm candidates from underrepresented backgrounds. Engaging IO Psychologists, like those at CodeSignal's Skills Evaluation Lab, in developing your technical evaluation tools allows you to ensure that your recruiting methods accurately measure candidates' job-relevant skills and do not introduce adverse impact to protected groups.
- **05.** Listen to what underrepresented candidates are looking for in potential employers. Lastly, one of the best—but often underutilized—sources of advice for increasing diversity on engineering teams is underrepresented candidates themselves, who have recently experienced what it's like to go through the technical hiring process. Rather than assuming what women engineers want from potential employers, for example, or what Black engineers think about your interview process, ask these candidates. You may be surprised by the insights they offer.

Get started!

It's never too early to prioritize diversity, equity, and inclusion on your engineering teams. The technical recruiting experts at CodeSignal can help.

LET'S TALK