

 **GENERAL ASSEMBLY**

THE STATE OF TECH TALENT ACQUISITION 2023



**FRONTLINE DATA FROM 1,000 HIRING
MANAGERS IN 10 COUNTRIES**

 **WAKEFIELD**

W/A Whiteboard
Advisors



CONTENTS

03 Foreword

04 The State of Tech
Talent Acquisition:
More Talk With
Little Progress

07 Key Findings

19 Best Practices for
Talent Leaders

21 Conclusion:
What's Next?

FOREWORD

BY EARL BUFORD

PRESIDENT OF THE COUNCIL FOR ADULT AND EXPERIENTIAL LEARNING



If there's one thing I've learned from my work leading workforce development organizations across the country, it's that there's a difference between making a commitment and delivering on that commitment.

Making a commitment is easy: it's a promise that you may not be held accountable to keep. So often, businesses and policymakers alike make well-intentioned commitments that they then struggle to fulfill. In the very survey that is the subject of this white paper, talent leaders readily acknowledge that they have fallen short of the commitments they themselves made to invest in stronger and more resilient talent pipelines.

The challenge of delivering on commitments, especially in the complex world of learning and work, has nothing to do with the intent, effort, or dedication of the people involved. The reality is that honoring commitments is hard — and it takes a level of investment that isn't always obvious during the exciting, energetic moments when the commitment is made.

Delivering on the commitment to building a better labor market means saying “we will hire this many workers without a four-year degree,” not “we'll consider applicants without a four-year degree on their resume.” It means engaging closely with community organizations who are working tirelessly to help people access the career opportunities that are so often out of reach. It means doing the work that organizations, like General Assembly, have done to bring together employers, local leaders, and training providers to tap into the best that all those groups have to offer.

In short, it means making a bigger investment up-front, with the understanding that this is necessary in order to attain the long-term goal.

Make no mistake: the need to address both talent gaps and persistent biases in the hiring process is an urgent one. But that's exactly the challenge. Focusing only on the immediate need will actually hinder, rather than advance, those broader goals. Companies like IBM have recognized that seeming paradox and are making broader and more systemic changes, like the launch of SkillsBuild, which is designed to make training and career opportunities more accessible to aspiring workers in the tech industry.

As the findings of this white paper make clear, the challenge is no longer about helping business leaders understand the problem. We should be heartened by that increased level of awareness, and energized by the fact that a growing number of companies have a shared vision of what tomorrow's world of work can look like. The challenge ahead is doing the hard work to go further than just making a commitment — making the deep-rooted, systemic changes necessary to actually honor that commitment. It won't be easy, and it won't happen overnight. But there's no better time to start than right now.

Earl Buford joined the Council for Adult and Experiential Learning (CAEL) as president in April 2021 and oversees the national nonprofit organization's work to improve education-to-career pathways for adult learners. Buford most recently served as chief executive officer of Partner4Work, the leader of the public workforce system for Pittsburgh and Allegheny County, and has also served as chief executive officer of Employ Milwaukee.



THE STATE OF TECH TALENT ACQUISITION: MORE TALK WITH LITTLE PROGRESS

Finding and recruiting tech talent has been a pervasive and longstanding challenge for enterprises across the globe—from the tech unicorns to longstanding industrial sectors like aerospace. The need for tech talent shifts continuously: the pandemic accelerated demand dramatically, and now global tech giants (Meta, Twitter, and Amazon, just to name a few) are conducting **high-profile layoffs** amid widespread fears of an approaching economic recession.

Against this backdrop, HR and talent leaders should be wary of viewing media attention on layoffs as ushering in an era of abundant talent availability. If anything, now is the time to revitalize the talent pipelines and hiring processes that have struggled to meet the needs of business units—because increasing digitization and the cross-industry adoption of advanced technologies have ensured that tech talent will continue to be essential for competitive advantage.

A closer look at the current tech labor market reveals that the tech giants' layoffs are correcting an overinvestment based on inflated growth forecasts. Many of the employees affected were supervisors and administrators, not **highly technical IT professionals**. Tech professionals like coders, engineers, and app

designers remain in high demand by companies in non-technical sectors, such as healthcare and financial services, whose survival and growth depend on their ability to recruit and retain tech workers. The **January job report** from the U.S. Bureau of Labor Statistics (BLS) showed that the unemployment rate in the technology job market fell to 1.5% in January from 1.8% in December. “Undoubtedly some companies over-hired and are now scaling back,” the **Computing Technology Industry Association** noted in response to the figures. “The low tech unemployment rate and steady hiring activity by employers confirms the long-term demand for tech talent across many sectors of the economy.”

The U.S. labor market remains tight in general with the **unemployment rate falling**



to 3.4% in January — the lowest since 1969. In the same month, there were over “109,000 unfilled jobs for IT Pros due to a **lack of qualified candidates**.” Analysis by **McKinsey** of Europe’s shortage of tech talent emphasized that just 7% of the global tech layoffs occurred in the continent and it forecasts a tech talent gap of 1.4 million to 3.9 million people by 2027 among the 27 EU nations.

As long as technology remains foundational for competitive advantage, companies across the globe will keep investing. A UK-based investor summarized why **demand for tech talent will persist** globally: “...software layers are running the world we live in today, whether it’s a hospital, school or construction site. So the core fundamentals will remain strong over the next decade.”

In the long-term, then, demand for technical talent will continue to be robust. Technology remains a growth sector (in the U.S. alone, the BLS forecasts that high **tech employment will grow** 13% between 2020 and 2030), and a growing number of occupations and **industries outside the tech sector** are also in need of workers with digital skills. Leaders looking to develop sustainable talent acquisition strategies and systems that meet the needs of the business must change hiring and recruitment practices, and also explore new ways to address the tech sector’s persistent struggles to build more diverse pipelines of talent.

Against this backdrop, how are business leaders across tech and talent management managing their pipelines to fill in-demand tech roles? What hiring approaches are being used and how effective are they? How are leaders pursuing goals for greater workforce inclusion and diversity — and what impact are these activities having?

To help tech talent leaders get a data-driven view of how companies are addressing these questions and other pressing talent issues, General Assembly joined forces with Wakefield Research to survey 1,000 HR professionals hiring for in-demand

There is a talent shortage that’s not going away. The demand for technology workers is increasing at a rapid pace. The supply side isn’t keeping up. It’s not going to keep up for multiple years, so companies that don’t adopt creative new talent acquisition strategies are going to be left behind.”

– ANKUR GOPAL, CHIEF EXECUTIVE OFFICER, INTERAPT



technology roles — software engineering, data analytics, data science, and UX design. The results show that tech talent acquisition remains heavily focused on traditional pipeline and hiring methodologies that struggle to deliver desired outcomes. Our intent with the whitepaper is to encourage leaders to look at their hiring practices and realize it's time to do something different. We highlight global tech talent practices to help leaders innovate how they address persistent skill shortages and fulfill their goals of building a more inclusive and resilient workforce.

This study takes the pulse of hiring managers to provide a set of global benchmarks for tech recruitment practices. Survey respondents work in the U.S., Canada, the United Kingdom, Singapore, Australia, Ireland, Sweden, The Netherlands, Switzerland, and France. Additionally, the whitepaper includes a set of recommendations for how businesses can take action to build more robust and diverse talent pipelines.



The demand for people with digital skills will remain high. People wrongly assume digital transformation is a technology challenge; it's actually a talent challenge."

**- JOSH BERSIN, GLOBAL
INDUSTRY ANALYST**





KEY FINDINGS

The challenge in recruiting sufficient tech talent is not a localized phenomenon: a 2021 Gartner survey of global IT executives found they saw **talent shortages** as the most significant adoption barrier to 64% of emerging technologies; the corresponding figure was just 4% in 2020.

This survey confirms the volatile nature of tech talent shortages across multiple nations and companies, and the lack of innovation that has been made in hiring practices to manage shifts in labor markets. The following sections highlight key survey findings on how HR leaders are tackling talent priorities — and grappling with the obstacles that still stand in the way of improving tech recruiting and hiring outcomes.

*TALENT ACQUISITION UNDER PRESSURE BUT NO DIAMONDS

Given intensified competition for key tech talent, survey respondents are concerned about meeting hiring priorities for critical roles.

RECRUITING METHODS CONTINUE TO UNDERDELIVER

How concerned are you that your recruitment and hiring methods are not enough to fill your open software engineering, data analytics, data science, and UX design positions in today's labor market?

NOT CONCERNED

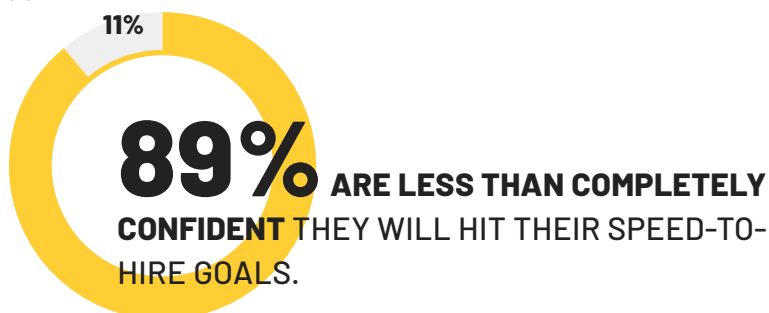


SPOTLIGHT: 91% of U.K. respondents are among those who are extremely, very, or somewhat concerned about filling open positions.

SPEED ADDS STRAIN

How confident are you that you'll meet your goals this year for speed to hire?

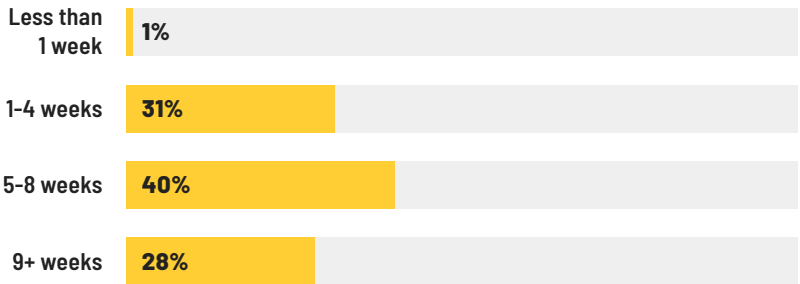
COMPLETELY CONFIDENT



SPOTLIGHT: In the U.S., 91% are less than completely confident they will hit their speed-to-hire goals. This figure rises to 94% in Sweden, and 100% in Ireland.

RECRUITING COMES AT A COST

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



HIRING TAKES ON AVERAGE
7 WEEKS
TO COMPLETE.

THE MEDIAN TIME IS
6 WEEKS.

MORE THAN **1 IN 4**
COMPANIES SPEND
9 OR MORE WEEKS
RECRUITING AND HIRING
FOR OPEN POSITIONS.

On average, approximately how much does your company spend recruiting and hiring for software engineering, data analytics, data science, and UX design positions?

THE AVERAGE COST TO FILL
A TECH ROLE IS JUST UNDER
\$30,000
(USD).

THE MEDIAN IS
\$25,000
(USD).


SPOTLIGHT: \$30,000
(USD) is close to the
average in the U.S.,
Singapore, and the U.K.

*THE UNFULFILLED DIVERSITY PROMISES ARE PILING UP

In the global reckoning on racial justice that began in the wake of George Floyd's death in June 2020, tech employers undertook substantial efforts to **invest in workplace initiatives** to enhance diversity, equity, and inclusion. Over the past two years, General Assembly has redoubled our long-standing commitment to building a more inclusive workforce, including partnerships with organizations like OneTen, founded in 2020 to help millions of Black workers without four-year degrees access high-wage, family-sustaining jobs.

Over two years since that global conversation began, our survey data shows that hiring managers still struggle to identify and hire talent from diverse backgrounds.

“**There is an acknowledgement that things need to change and now it's a question of what are those changes that need to happen.** When companies retain diverse talent, new talent is more likely to be excited to come to those companies. So what are those retention strategies that are promising and it's not just lifting up Employee Resource Groups (ERGs), it is changing your practice of promotions, it is recognition.”

– MARC SPENCER, CHIEF TALENT AND DEVELOPMENT OFFICER, ONETEN

“

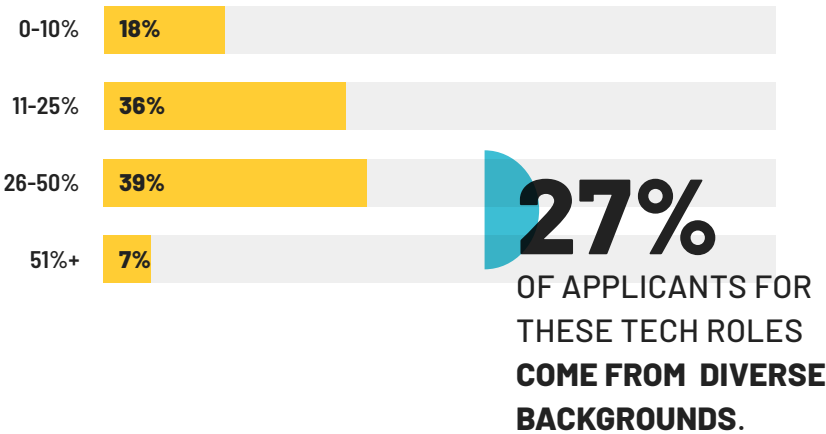
There needs to be a tremendous amount of equity, which is meeting people right where they are throughout the entire talent acquisition, hiring and onboarding process.”

– MERABETH MARTIN,
PRESIDENT AND CHIEF
PEOPLE OFFICER, INTERAPT



LOW DIVERSITY AMONG APPLICANTS...

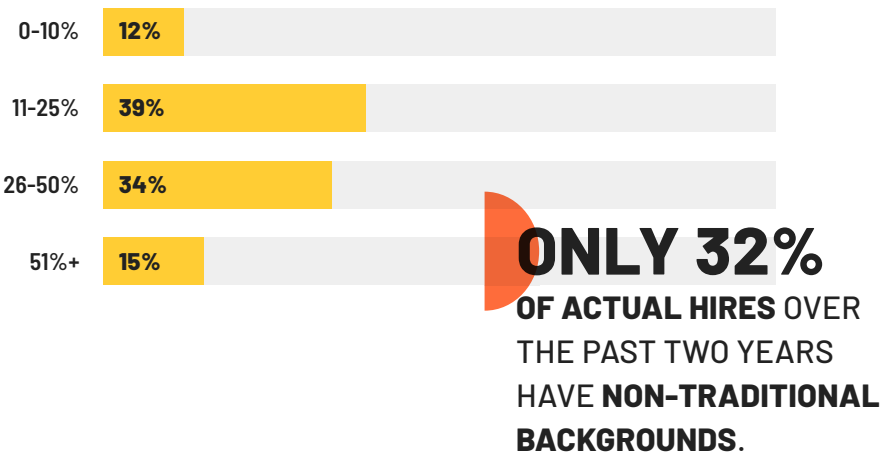
Approximately what percentage of your applicants for software engineering, data analytics, data science, and UX design positions come from a diverse background?



SPOTLIGHT: Nearly 1 in 5 HR leaders (18%) admit a scant 10% or less have come from a diverse background.

... IMPEDES DIVERSITY IN HIRING

About what percentage of the candidates whom you've hired over the past two years for software engineering, data analytics, data science, and UX design positions have come from a non-traditional background?



SPOTLIGHT: HR leaders report that, on average, just 32% of their new hires for tech positions over the past two years have come from non-traditional backgrounds. A majority (51%) say a quarter or less of their hires over the past two years have come from non-traditional backgrounds.

*THE TRADITIONAL TECH TALENT PIPELINE IS DEAD

At nearly every stage of the hiring process itself, long-standing practices and calcified mindsets amplify the challenges that face employers seeking to build a more inclusive and effective hiring process. A growing number of organizations have emerged to call attention to these legacy practices, including Opportunity@Work, whose groundbreaking research into the millions of workers who are Skilled Through Alternative Routes (STARs) has catalyzed a national movement to change hiring and recruiting. General Assembly is a partner of Opportunity@Work's Tear the Paper Ceiling campaign, launched in partnership with the Ad Council in fall of 2022.

The survey results highlight how these practices manifest in recruiting and hiring processes.



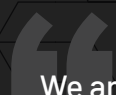
What surprises me the most is that HR leaders are worried that they won't be able to fill their hiring needs, but they continue to use the same strategies for recruitment and screening. **They haven't adjusted knowing that they have these needs."**

**- GINA ROSEN, SOCIAL
SCIENCE RESEARCHER,
OPPORTUNITY@WORK**



HIRING PROCESSES UNDERMINE DIVERSITY COMMITMENTS

How strongly do you agree or disagree with the following statement? My company has made big commitments to hiring diverse candidates for our roles requiring technical skills like software engineering, data science/data analytics, and UX design but hasn't followed up with changes to the hiring processes needed to meet these goals.

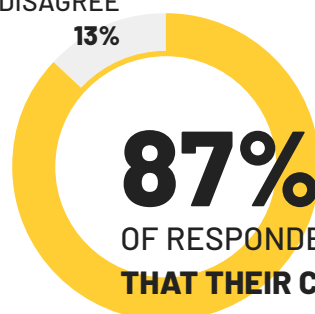


We are seeing companies focus on diversifying their hiring panels, diversifying their interview teams. That relatively speaking is a light lift, but **it can make a difference in their assessments of candidates."**

**- MAURICE JONES, CHIEF EXECUTIVE
OFFICER, ONETEN**



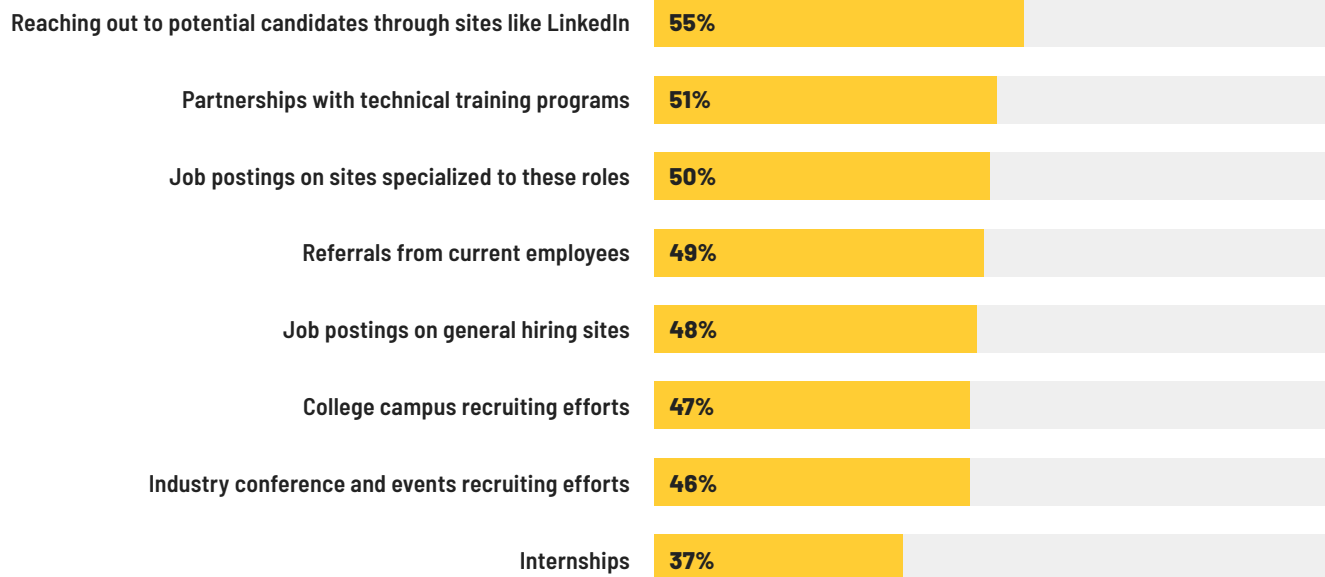
DISAGREE
13%



87%
OF RESPONDENTS **AGREE**
THAT THEIR COMPANY HAS
NOT MADE THE CHANGES
TO THE HIRING PROCESS
NECESSARY TO MEET
DIVERSITY GOALS.

THE NETWORK EFFECT: EMPLOYEE REFERRALS REINFORCE HOMOGENEITY

What avenues are you currently using to source candidates for your open positions in software engineering, data analytics, data science, and UX design?



49% OF COMPANIES USE REFERRALS FROM CURRENT EMPLOYEES to find candidates for these positions. For 55 percent of respondents, the most popular avenue to find tech talent is contacting individuals via LinkedIn and similar sites.



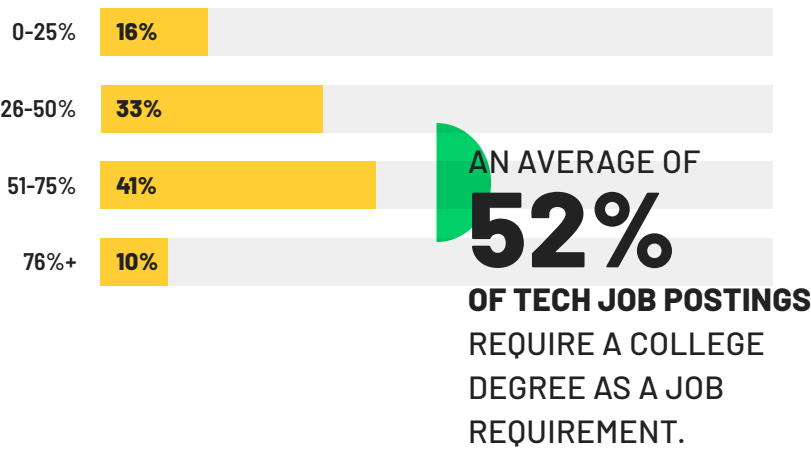
SPOTLIGHT: In the U.K. this figure rises to 55%.

WHY THE NETWORK EFFECT MATTERS: A body of research indicates that social and professional networks play an outsized role in hiring decisions; these networks are especially important within tech companies and tend to be sharply segregated by race, which limits both awareness of opportunities and access to referrals among people of color. Consequently, candidate referrals tend to favor people from the majority group of employees and with traditional backgrounds. The career outcomes recorded in the survey illustrate the end result: of actual hires over the past two years, only 32% have non-traditional backgrounds.

As General Assembly and others have written, companies that rely on existing networks, or prioritize poaching talent from their competitors, find themselves dealing with a **"self-inflicted wound"** of rising salaries and a **diminishing tech talent pool**. Rethinking this "build vs. buy" paradigm, and investing in pathways to cultivate new tech talent is a more labor-intensive process, but one that can have a profound impact on both addressing skill shortages and fulfilling equity and opportunity goals.

DISMISSED BY DEGREES: A PERSISTENT REQUIREMENT

About what percentage of your job postings for software engineering, data analytics, data science, and UX design positions list a college degree as a job requirement?

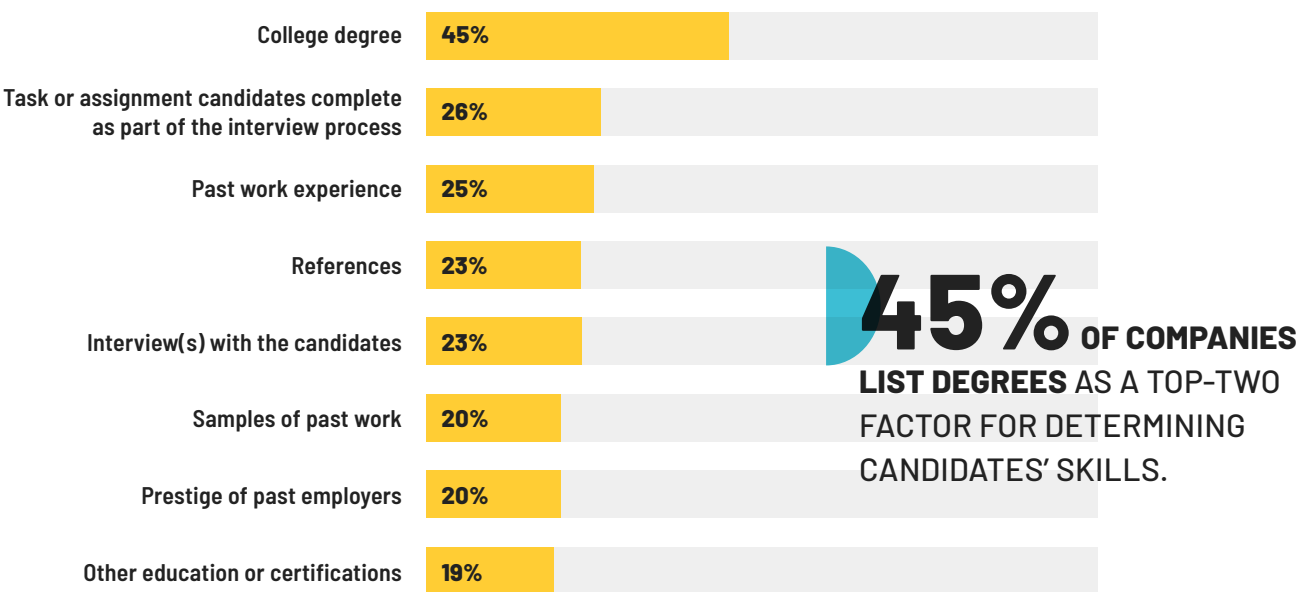


“The first step would be to remove the degree requirement from job postings. By removing the degree requirements you’re starting to see a more diverse talent pool that you have access to and that’s just the start.”

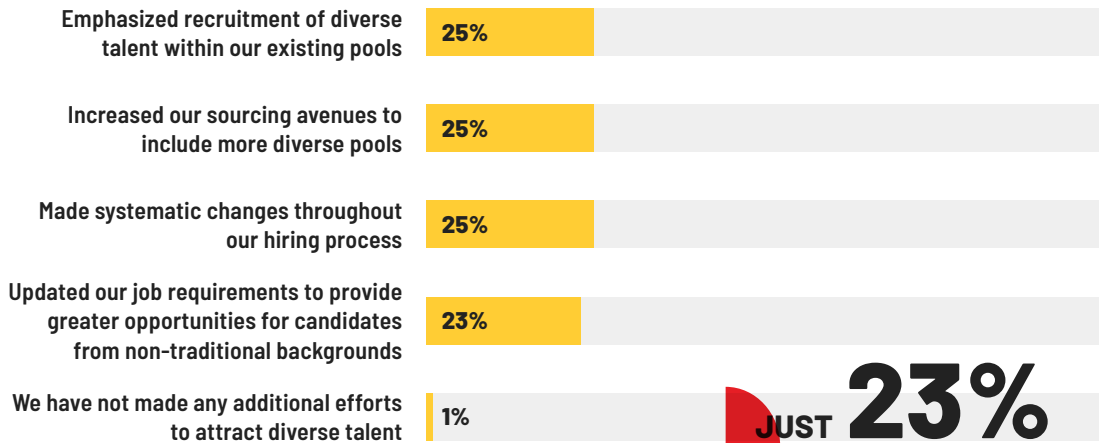
- GINA ROSEN, SOCIAL SCIENCE RESEARCHER, OPPORTUNITY@WORK



What are the top three methods you use to determine if candidates have the right skillsets needed for software engineering, data analytics, data science, and UX design roles when hiring remotely? TOP TWO RANKED RESPONSES



Which best describes how you've altered your typical approach to attract more diverse talent in software engineering, data analytics, data science, and UX design positions?



JUST 23%
OF FIRMS HAVE REVISED THEIR
JOB REQUIREMENTS TO EXPAND
ACCESS FOR CANDIDATES FROM
NON-TRADITIONAL BACKGROUNDS.

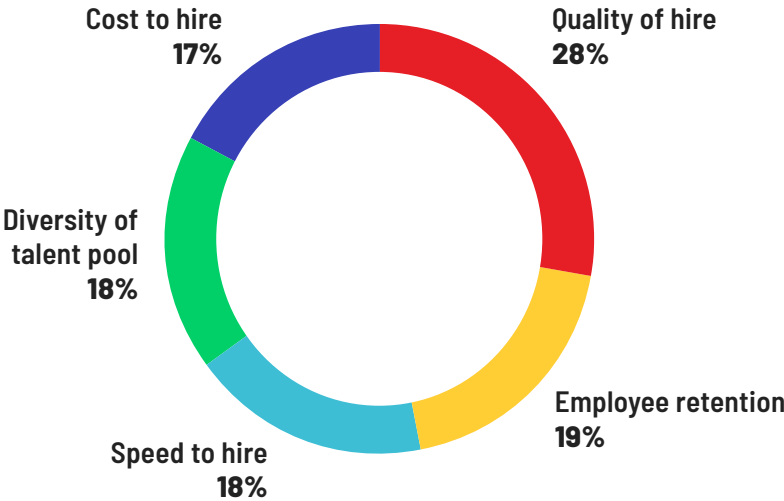
WHY DEGREE REQUIREMENTS MATTER: For decades, talent acquisition practices have privileged people with a four-year bachelor's degree and candidates with so-called "traditional" backgrounds, which systematically excludes those who did not graduate college or have been impacted by the criminal justice system. The survey confirms the importance of the degree as a requirement — despite the fact that millions of workers without degrees already have the skills to succeed in higher-wage roles, according to **recent research** from the nonprofit Opportunity@Work.



SPEED TO HIRE AND DIVERSITY OF TALENT: INCOMPATIBLE METRICS

What are the most important success metrics at your organization when hiring for software engineering, data analytics, data science, and UX design positions?

TOP RANKED RESPONSE



18% OF RESPONDENTS
SAY SPEED TO HIRE IS THE
MOST CRITICAL SUCCESS
METRIC WHEN HIRING FOR
TECH POSITIONS.

WHY THE SPEED TO HIRE METRIC MATTERS: For many HR leaders, speed to hire remains a key performance indicator — one that supersedes the need to invest time and resources in revamping hiring practices. Hitting this metric is difficult at the best of times and, as previously mentioned, almost **nine in 10 HR leaders** expressed concern that they will meet their company’s speed to hire goals this year. This uncertainty is shared by **93% of HR managers** — indicating that the frontline itself is even more concerned about time-to-hire metrics.

One unintentional consequence of this focus on speed is that the metric incentivizes leaders to stick with more conventional approaches that end up exacerbating the lack of diverse and non-traditional candidates. The following example from the survey illustrates this.

While the findings of the survey primarily underscore the challenges facing leaders, they also reveal a few promising trends which will be examined in the next section.

* INNOVATION HIGHLIGHTS

While our survey highlights a need to do something different within the tech talent pipeline, the picture wasn't all grim. The survey surfaced examples of HR leaders pursuing activities and initiatives that diversify and improve conventional hiring practices. And deliver better talent outcomes.

DIVERSITY IS AN EMERGING METRIC

What are the most important success metrics at your organization when hiring for software engineering, data analytics, data science, and UX design positions? **TOP RANKED RESPONSE**

FOR NEARLY
ONE FIFTH
OF ALL RESPONDENTS
(18%), DIVERSITY OF THE
TALENT POOL WAS CITED
AS THE MOST IMPORTANT
SUCCESS METRIC.

Significant numbers of technology companies have adopted initiatives to create a more inclusive and diverse workforce, which studies show **improves business growth**. Tracking performance towards diversity and inclusion hiring goals is increasingly important.

BUILDING PARTNERSHIPS TO HIRE BETTER OR GROW INTERNAL TALENT

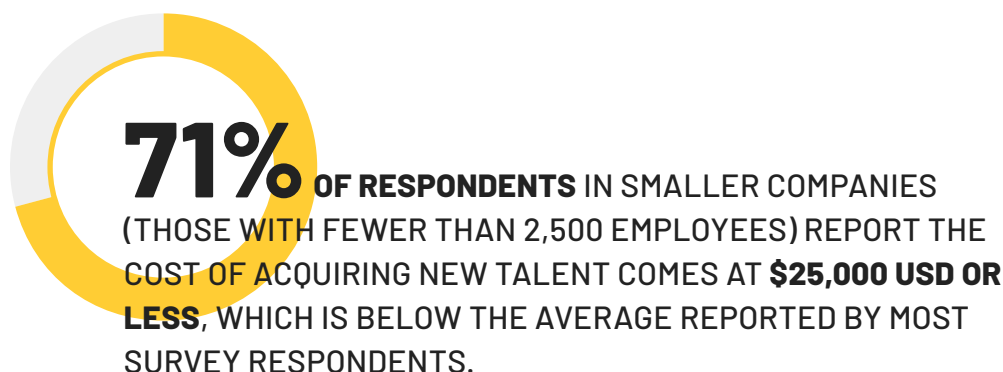
What avenues are you currently using to source candidates for your open positions in software engineering, data analytics, data science, and UX design?

51% OF RESPONDENTS
ARE LEVERAGING PARTNERSHIPS
WITH TECH TRAINING PROGRAMS
TO INCREASE THE PIPELINE OF
SKILLED WORKERS.

These programs help companies offer existing employees ways to acquire tech-specific skills that tie to open positions. In addition to providing ways to upskill and reskill, training programs typically open opportunities for employees from underrepresented populations.

SMALLER COMPANIES DEMONSTRATE HIRING AGILITY

On average, approximately how much does your company spend recruiting and hiring for software engineering, data analytics, data science, and UX design positions?



About what percentage of the candidates whom you've hired over the past two years for software engineering, data analytics, data science, and UX design positions have come from a non-traditional background?



These results, though limited, suggest that some employers are exploring new approaches to recruiting and hiring — and, more importantly, that those who embrace the potential of so-called “non-traditional” talent can also see benefits in the time and cost to hire. In our own white paper “Rethinking the Build vs. Buy Approach to Talent,” HR analyst, author and talent expert Josh Bersin makes the case that “a new breed of immersive training strategies, pioneered by coding bootcamps and other accelerated training providers, is enabling employers to develop experts in-house — and with unprecedented efficiency, speed, and scale.”

READY TO DO SOMETHING DIFFERENT?

START WITH THESE BEST PRACTICES

General Assembly's work with employers across the globe, from L'Oreal to Booz Allen Hamilton, have informed our perspective on the approaches and tactics that can both address critical talent needs and help bridge long-standing equity gaps in the tech industry. The below section provides a few concrete recommendations for HR and talent leaders looking to make good on their promises of building stronger and more inclusive talent pipelines.



EMPOWERED TALENT LEADERS.

As the survey results make clear, the barrier preventing many HR and talent leaders from achieving their hiring goals is that the hiring practices themselves haven't changed. While the need for tech talent continues to accelerate and the C-suite often feels a sense of urgency to address equity gaps for ethical (or public relations) purposes, hiring managers often face a different type of urgency: the need to fill open roles as quickly and cheaply as possible. Building a stronger tech workforce will depend on encouraging and incentivizing hiring managers to make more systemic shifts a priority — which will likely require intensive changes to the hiring process, from removing degree requirements to forging partnerships with community organizations and training partners. It's incumbent on business leaders to give their talent teams the time, space, and support to make these broader changes, knowing that they will pay off in the long run.

ALTERNATIVE PATHWAYS.

Community-based workforce development organizations and traditional higher education providers have a vital role to play in helping young people from historically underserved communities chart paths to economic opportunity. But they are also far from the only way to achieve financial mobility. A growing number of new approaches, such as tech industry apprenticeships, are showing promise as ways to complement traditional higher education and create smoother pathways into high-demand fields. Recognizing the potential of these models can help employers look beyond traditional candidates.


TARGETED COMMUNITY-BASED PARTNERSHIPS.

While national efforts focused on reimagining hiring and training are gaining steam, it's often the local and regional groups that can make the most direct impact. Through our work with community leaders in cities like Sacramento, Buffalo, and Louisville, we've seen the impact that these partnerships can have on helping businesses engage directly with their communities — and, in turn, create new pipelines of talent from places that have historically been overlooked.

URGENT NEEDS, URGENT SOLUTIONS: ADDRESSING BIAS IN THE HIRING PROCESS

When it comes to persistent racial inequities in the tech industry, the same principles — systemic change and upfront investment, rather than quick fixes — must apply. “We try to make this about a moment,” says Michael Collins of the nonprofit JFF, reflecting on the wave of attention paid to racial equity in the workplace after George Floyd’s murder. It will take more than a couple years to reverse a trend that has defined the global economy for centuries.

Of course, that doesn’t mean that the challenge is any less urgent, or that hiring managers and executives are absolved from making progress. Rather, it means that explicit goals (e.g., “a 20% increase in non-white executives by 2025”) must also be tied to concrete milestones in practice change. What steps will your organization need to take in order to achieve an ambitious goal five or ten years down the road? How can those long-term goals be broken up into more discrete practice shifts, to ensure that businesses continue along a trajectory of progress in the short and medium terms? This approach, of course, also requires employers to celebrate small victories while acknowledging the long road ahead.

 **It’s not about a moment — it’s about progress over time. If you thought it was going to be easy, you didn’t understand the way systemic racism works.”**



CONCLUSION: WHAT'S NEXT?


It's clear from these research findings that the old way of hiring diverse and skilled technical talent isn't working. A gap still exists between talent leaders' recognition of pressing challenges and the implementation of solutions to those issues. Whether future surveys reflect any significant progress, either on the diversification of talent pools or on the closing of skill gaps, will depend on businesses' ability to recognize that change must be made and translate intentions into practice at the strategic and operational levels of HR.

We hope that the results of this survey, and the recommendations and outside perspectives included in this paper, can provide companies with the data, rationale, and the practical strategies to rethink their approach to tech talent acquisition. The demands of an increasingly digital world of work will require fundamental shifts in the way that businesses source, recruit, hire, and retain skilled tech workers. But if talent leaders and executives take action to make these shifts, they will have played a pioneering role in our collective efforts to build a stronger and more inclusive tech workforce.



ABOUT GENERAL ASSEMBLY

Since 2011, General Assembly (GA) has launched the technology careers of tens of thousands of diverse individuals and cultivated emerging tech talent pipelines for hundreds of the world's leading employers. As featured in *The Economist*, *Wired*, and *The New York Times*, GA offers bootcamps, digital upskilling, apprenticeships, and other career onramps into today's most in-demand jobs in web development, data, design, and more. Part of global HR solutions giant The Adecco Group, GA has become a leading provider of world-class technical training, equitable job opportunity, and social impact. GA has been recognized as one of Deloitte's Technology Fast 500, and a Fast Company World-Changing Idea, as well as the #1 Most Innovative Company in Education.



HOW CAN GA BUILD YOUR DIVERSE TECH TALENT PIPELINE?

Get in touch →