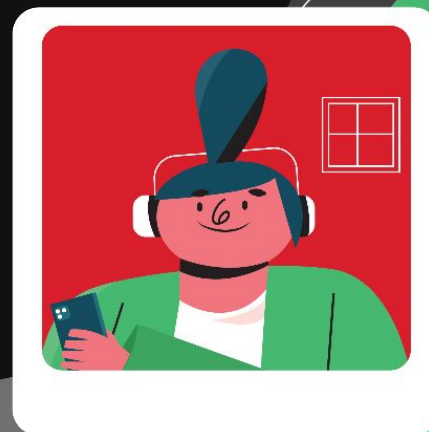


State of Tech Hiring in 2024





“Developers today are facing mixed macroeconomic conditions, rapid technological shifts, and constantly shifting workplace dynamics.

Recruiters are striving to do more, with less. They’re learning how to incorporate new tools and approaches to improve the overall hiring experience, while working with possibly smaller recruiting teams and budgets.

As both sides adjust to an AI-driven future and the implications on their jobs, breaking technical roles into specific skill sets, and having the resources to evaluate those skills, will lead to team and business success.

In this report, we address all of these challenges. We look at what developers want and need from their job, how tech hiring processes have evolved, and what 2024 has in store in the way of developer recruiting priorities and potential hurdles.”

Amanda Richardson, CoderPad CEO

Key numbers

78%

of developers and 81% of recruiters say that soft skills are at least as important as hard skills.

36%

of developers say they're not interested in taking on managerial responsibilities.

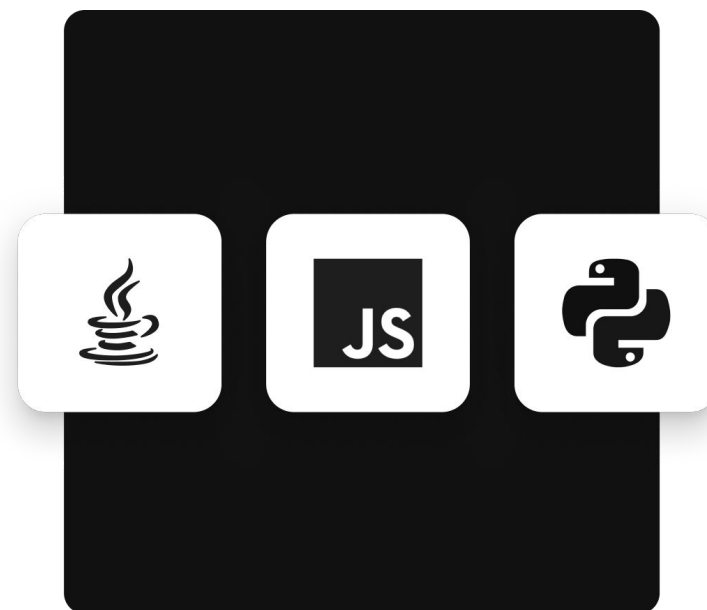
70%

of developers think that AI will help reduce their workload, and 60% would like to use it more as part of their job.

About CoderPad

CoderPad and **CodinGame** joined forces in 2021 to become the technical hiring platform that lets the candidate's skills say it all. We're on a mission to make hiring technical talent real, fair, and fast for candidates, recruiters, and hiring managers alike.

With **CoderPad Screen**, evaluate candidates' coding skills with gamified, hands-on programming tests that only take 60 seconds to set up. With **CoderPad Interview**, conduct collaborative coding interviews and invite developers to write, execute and debug code—all in a performant, browser-based environment.



01. What do developers want?

- a. When looking for a job
- b. At work
- c. From their career

02. How has the tech talent market changed over the past year?

- a. Shifts in job security and retention
- b. How tech hiring processes have evolved in 2023

03. What will tech hiring look like in 2024?

- a. 2024 tech recruitment goals and priorities
- b. Top 2024 tech hiring challenges
- c. Recruitment budgets in 2024

04. Survey demographics

01. What do developers want?

- a. When looking for a job
- b. At work
- c. From their career

TL;DR All in all, developers love what they do—and they strive to achieve a healthy work-life balance and receive a competitive salary while doing it.

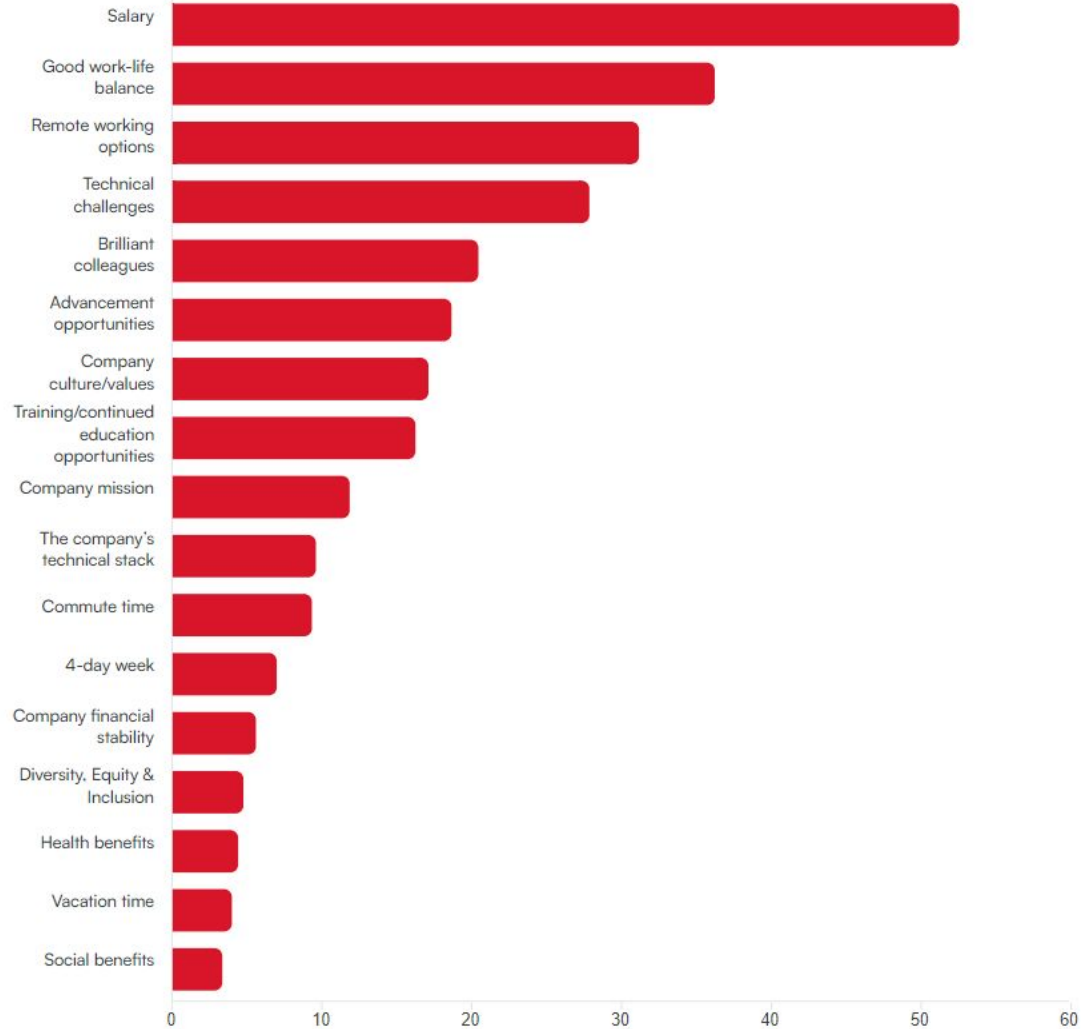
Developers seek stability, clear direction and the opportunity to learn new skills. However, they don't all aspire to become managers.

The majority of programmers are already using AI for improved productivity, and they want to see more of it in their jobs.

a. When looking for a job

When considering a job offer, what matters most to you?

Respondents could select multiple answers.



Hot take

Salary, work-life balance and remote possibilities matter most.

Developers say that **salary**, **work-life balance**, and **remote working options** are their most important considerations, in that order. These priorities remain unchanged, compared to last year.

So yes, **remote possibilities are still just as important to tech talent**—if not more. 31% of developers say it's a prime concern, up from 28% last year. So maybe reconsider that return-to-office (RTO) policy you've been working on?

Among HR, there's been a lot of talk of the **4-day week** this year. As far as tech talent is concerned, this workplace benefit has yet to move from the "nice-to-have" category to the "must-have" category. Only 7% of developers say it is one of their top 3 considerations.

b. At work

All in all, developers love what they do.

But, that doesn't mean that there aren't things they'd like to see more or less of.

On a scale of 0 to 10, how much do you enjoy your current job?

0: I hate my job, 10: I love my job



Developers would like to see less unplanned changes and more clear direction.

This year, developers highlight the same top 3 work challenges they have since 2020.

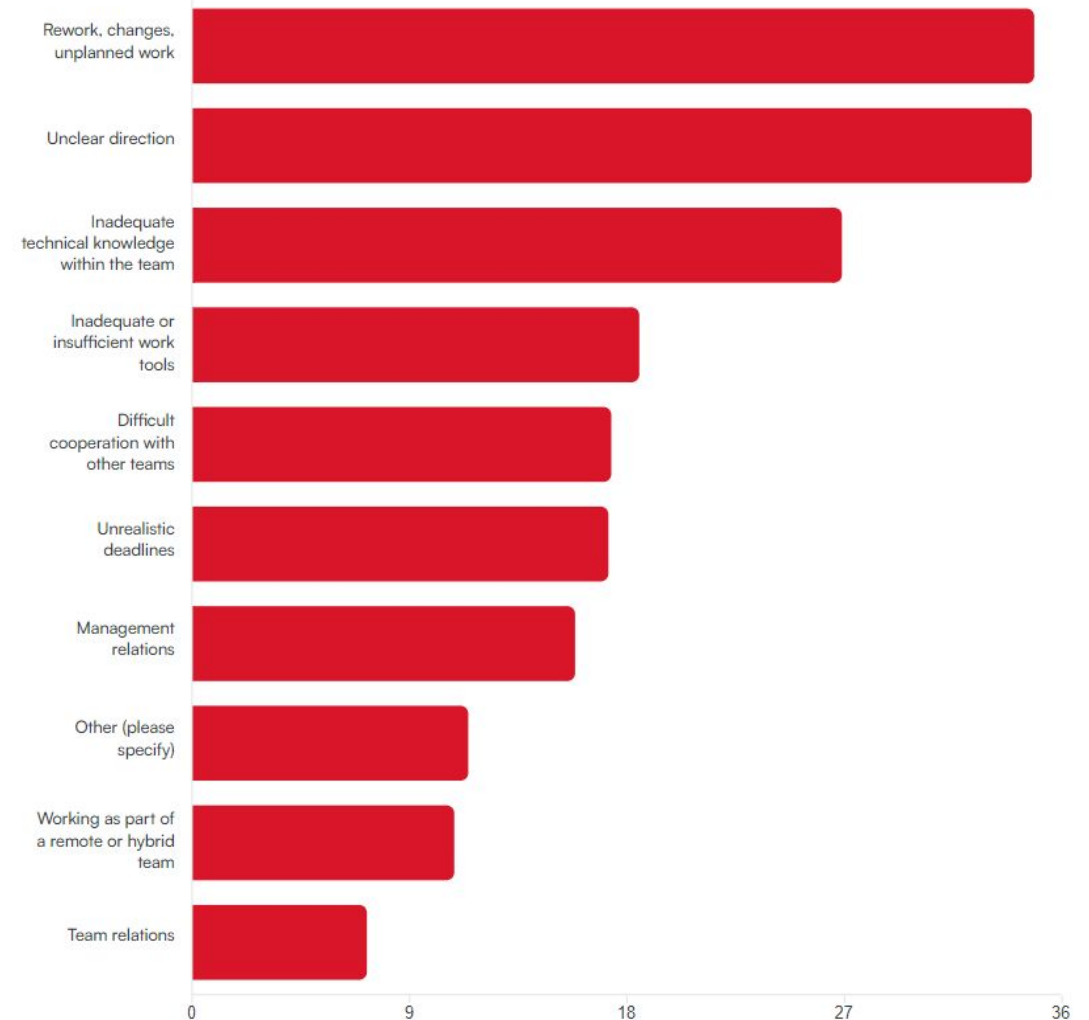
- **Unplanned changes to their schedule** are still their biggest pain point. Although, this seems to be slightly less central this year: 35% of respondents say it's a top challenge, compared to 42% last year.
- **Unclear direction** is the second ranked difficulty on the job.
- **A lack of technical knowledge in the team** to implement projects is their third most challenging problem.

Unrealistic deadlines has dropped in the list of challenges, now coming in behind **difficult cooperation** and **inadequate or insufficient work tools**.

Plus, despite the fact that close to a third of developers say that remote options are a top priority, 10.9% say it's one of the most challenging aspects of their work.

What are your main challenges at work?

Respondents could select multiple answers.



Continued learning is a plus.

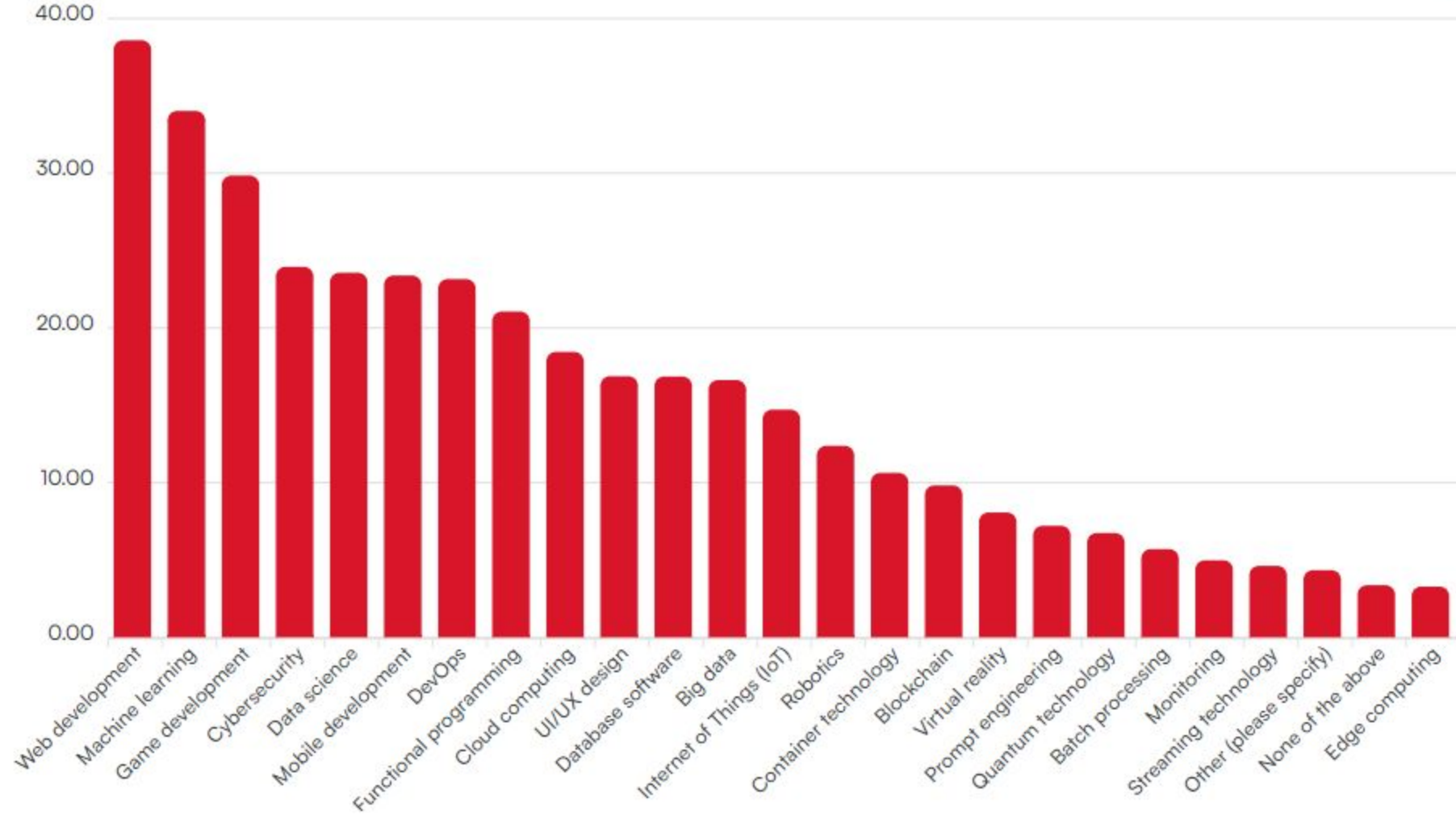
Developers appreciate having the opportunity to hone their technical skills on the job.

16% say that “continued education” is a major consideration when contemplating a job offer.

The top three skills developers want to learn in 2024 are **web development, machine learning, and game development.**

Which technical skill or skills would you like to acquire in 2024?

Respondents could select multiple answers.



AI insights

Developers want to use more AI on the job, but doubt lingers.

Around **67%** of tech professionals surveyed said that they already use AI as part of their job. And, it would seem, that number is set to grow.

Would you like to use more AI as part of your job?



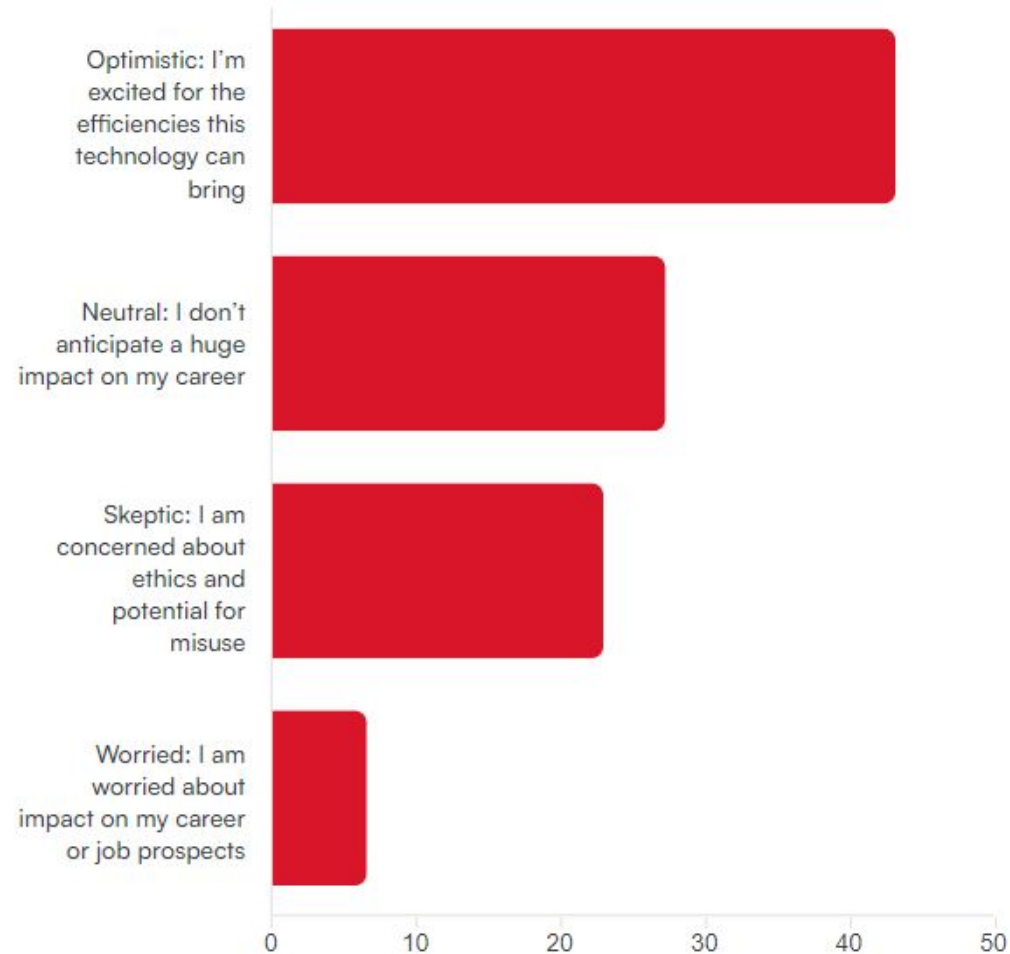
AI insights

Indeed, **43% of developers say that they're optimistic** about what AI can bring to their work lives, and 60% of developers say they want to use it more.

Still, doubt lingers around this technology. **23% are skeptical**, and 6% go as far as to say that they're worried about the technology's impact on their career or job prospects.

Another 22%% say that they're on the fence about whether or not more AI at work is a good or a bad thing.

Which option most closely describes your current outlook on generative AI?



AI insights

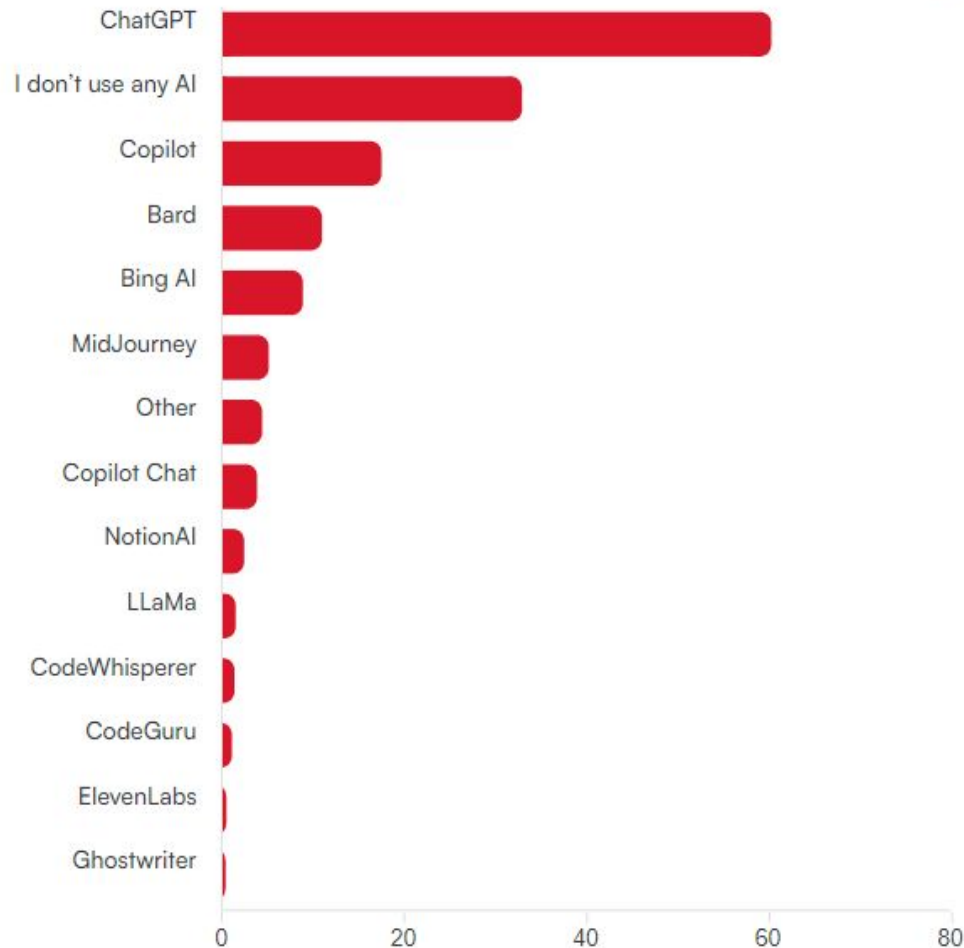
ChatGPT is crowned most-used AI tool.

Yes, the vast majority of those using AI at work, are using ChatGPT.

Copilot is our runner up, and others mentioned in the comments section include Tabnine, Codeium and Phind.

33% of the developers surveyed said that they don't use any AI at work. We take a closer look at this below.

Which of these AI-assisted tools do you use at work?



AI insights

Developers use AI to save time.

The overwhelming sentiment is that AI will save developers' time and increase productivity.

In fact, close to **70% of developers are confident that AI-assisted tools will help carry their load.**

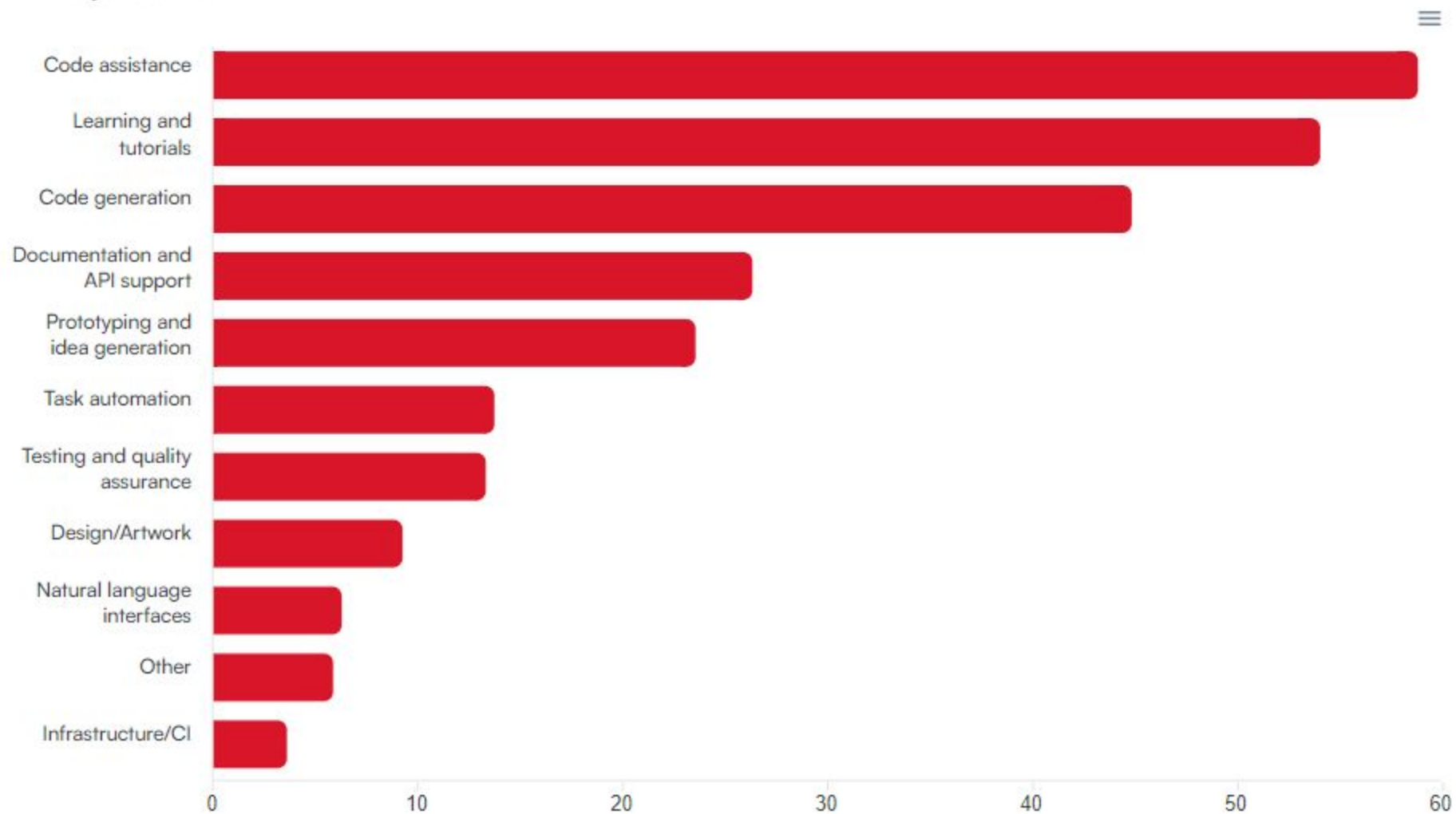
How? Developers cited:

- Code assistance
- Learning and tutorials
- Autocompletion/code generation
- Documentation and API support

Do you think that AI-assisted tools will help reduce your workload?



What do you use AI for?

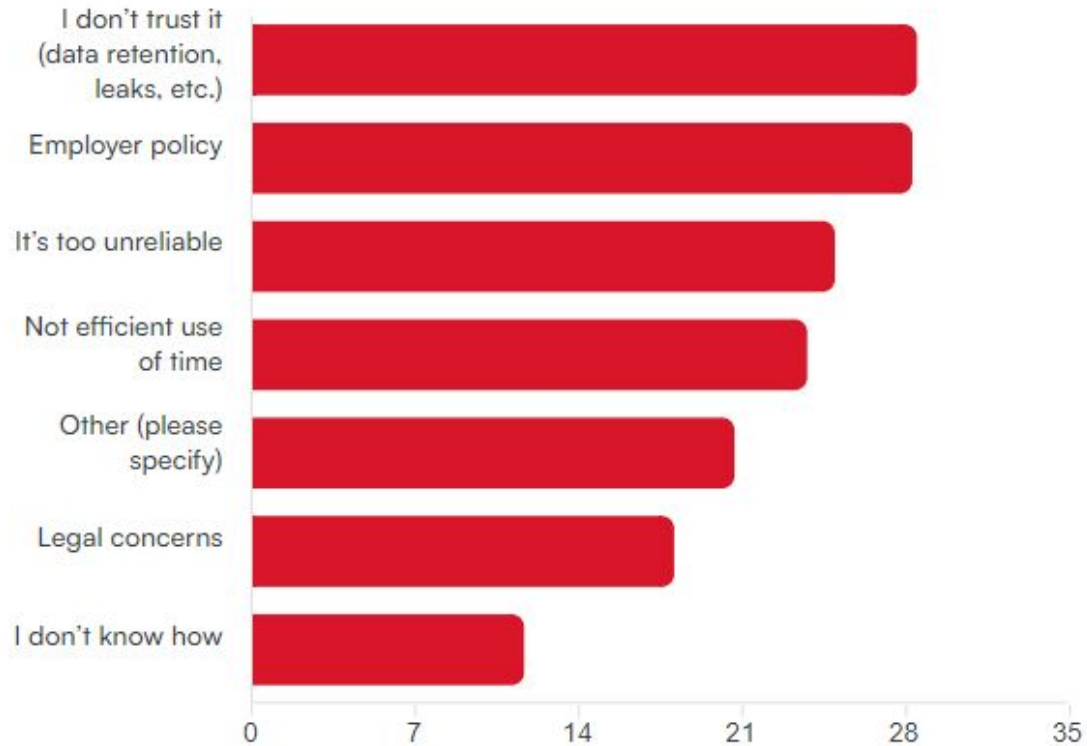




I use AI to help write code that would otherwise be just a waste of time to write manually, like making fetch functions with different urls or short script tools in Python.

Anonymous respondent

Why don't you use AI at work?



AI insights

What about those who aren't using AI?

We asked the 33% of developers who aren't using AI on the job, why not?

29% of developers said that they **don't trust the technology**, while 28% said that **their employer is against it**.

A quarter of developers find AI to either be **unreliable or inefficient**.

Respondents also commented that in certain cases, it's just not relevant and useful to the specific work they do.

Others expressed a reluctance to "turn over" their work to AI. Some went as far as to say that doing so would be "lazy", "unethical" or detrimental to their skills.

c. From their career

Did you start your professional career in a different field?



● Yes ● No

The road to software engineering.

Not all developers have the same professional and educational background. Some developers take the scenic route!

In fact, **a third of the developers we surveyed said that they started out doing something else entirely**, before working in software development.

Once they're on the "developer" road, where do they hope to drive to?

Not all developers aspire to managerial positions.

36% of developers say they're not interested in taking on managerial responsibilities.

Some programmers will shine as individual contributors, while others make good people managers, superb tech leads, notable architects, or outstanding mentors.

Do you already have, or do you aim to gain, managerial responsibilities in your career?



● Yes ● No ● N/A

Actionable learning

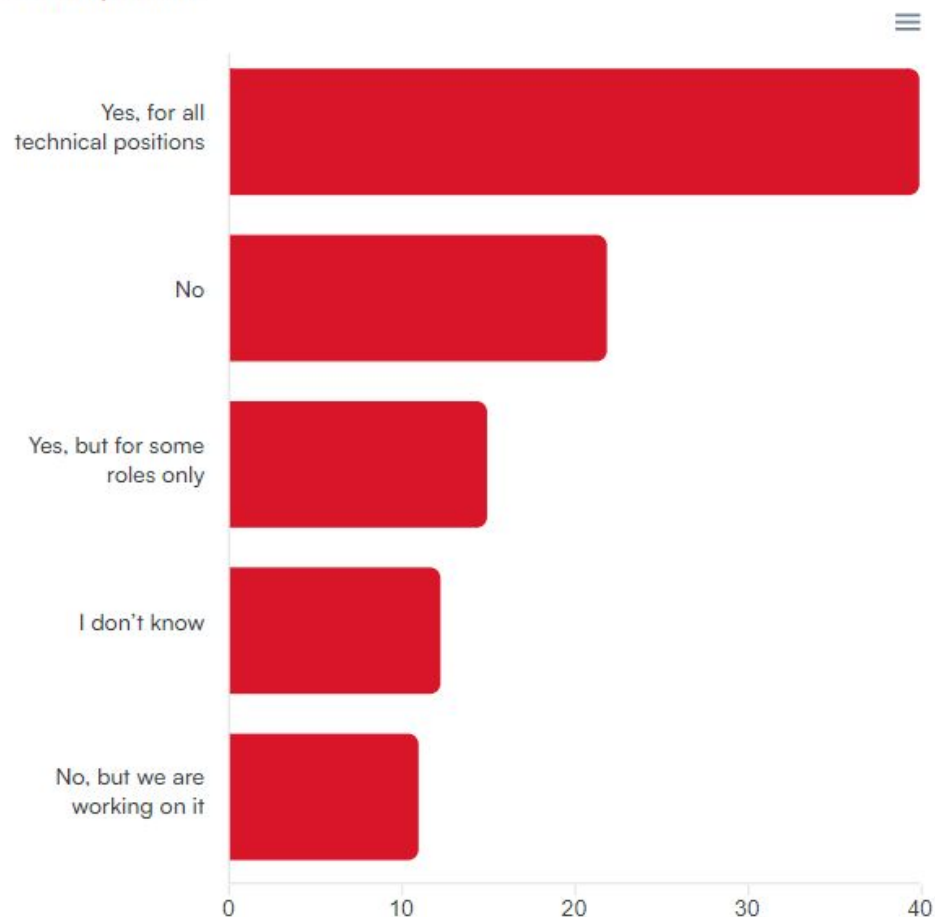
Developers want a clear path for advancement.

We asked recruiters and hiring managers if they had clearly documented career ladders. **Less than half said that their company has built a career progression framework for all technical positions.**

15% say that there is a career ladder in place, but only for some roles.

Bearing in mind that “better advancement opportunities” is the number one reason developers change jobs, companies need to do better.

Does your company communicate a clear, documented internal career ladder for technical positions?



You need to pave the way for non-managerial opportunities too.

It's encouraging to see that, among those who do have a documented career ladder, **66% include non-managerial advancement opportunities.**

Does your career ladder include non-managerial advancement opportunities?



Actionable learning

Overall, developers are satisfied with their management.

Approximately $\frac{3}{4}$ of developers are happy with their current management. Hooray!

On the flip side, those who aren't happy, may well do something about it. 13% of developers say that they're looking to move elsewhere "in search of better management".

It's important to regularly collect feedback from the tech team on their manager expectations.

Are you happy with your current manager?



02. How has the tech talent market changed over the past year?

a. Job security and retention

b. Tech hiring processes

TL;DR Developers are more worried about job security and less confident in their ability to change jobs. Still, close to half are considering leaving their gig (particularly motivated by better advancement opportunities and higher salaries).

Live coding interviews and coding tests appeal to developers—and take-home projects are making a come back!

Both recruiters and developers are using AI at work, but we're yet to see wide adoption within the technical assessment process itself.

a. Job security and retention

Do developers worry about losing their job?

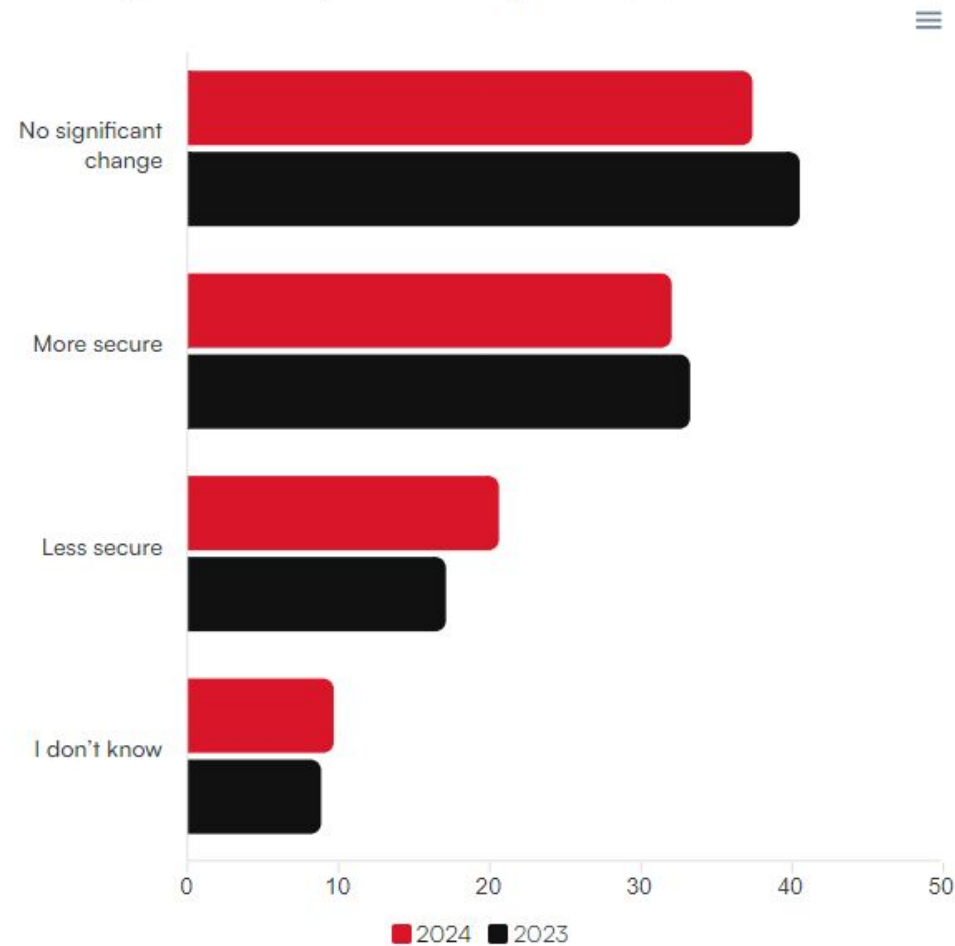
There seems to be **growing concern around job security**. 21% of developers say that they feel less secure in their job, compared to this time last year.

Last year, 17% said that they felt less secure vs. the previous year.

Still, 37% of developers say they've felt no significant change in the past 12 months, and 32% say they feel more secure than before.

Do you feel more or less secure in your job, compared to this time last year?

Job insecurity is defined as "the perceived threat of job loss and the worries related to that threat".



Has developers' confidence been knocked?

On top of the fact that a portion of developers feel less secure in their jobs, some have also **less faith in their ability to change companies or roles.**

In 2021, we asked developers how easy they thought it would be to change jobs (on a scale of 0 to 10, 10 being extremely easy). The average answer was 7, it's now down to 5.

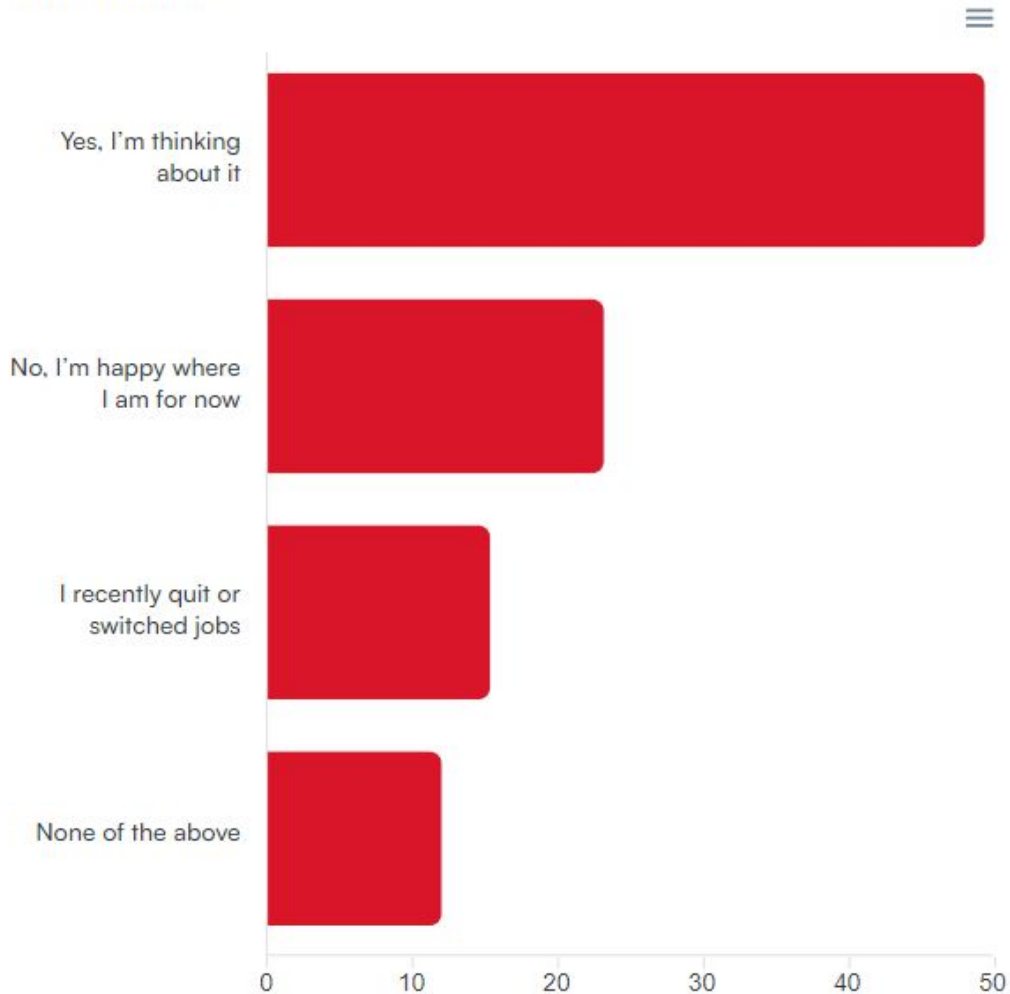
It looks like the mix of hiring freezes, tech layoffs and economic uncertainty that hit the talent market has left developers feeling slightly shaken.

On a scale of 0 to 10 how easy do you think it is to change jobs as a developer?

0: I think it's difficult to change jobs as a developer. 1: Easy peasy! I could easily find another job.



Are you personally thinking about quitting your job or exploring new job opportunities in the next 12 months?



Still, developers are up for change.

Despite the fact that some developers have chipped confidence, **close to half are still thinking about leaving their job in the next 12 months.**

This number is slightly lower vs. last year, when 52% of developers were pondering their next move.

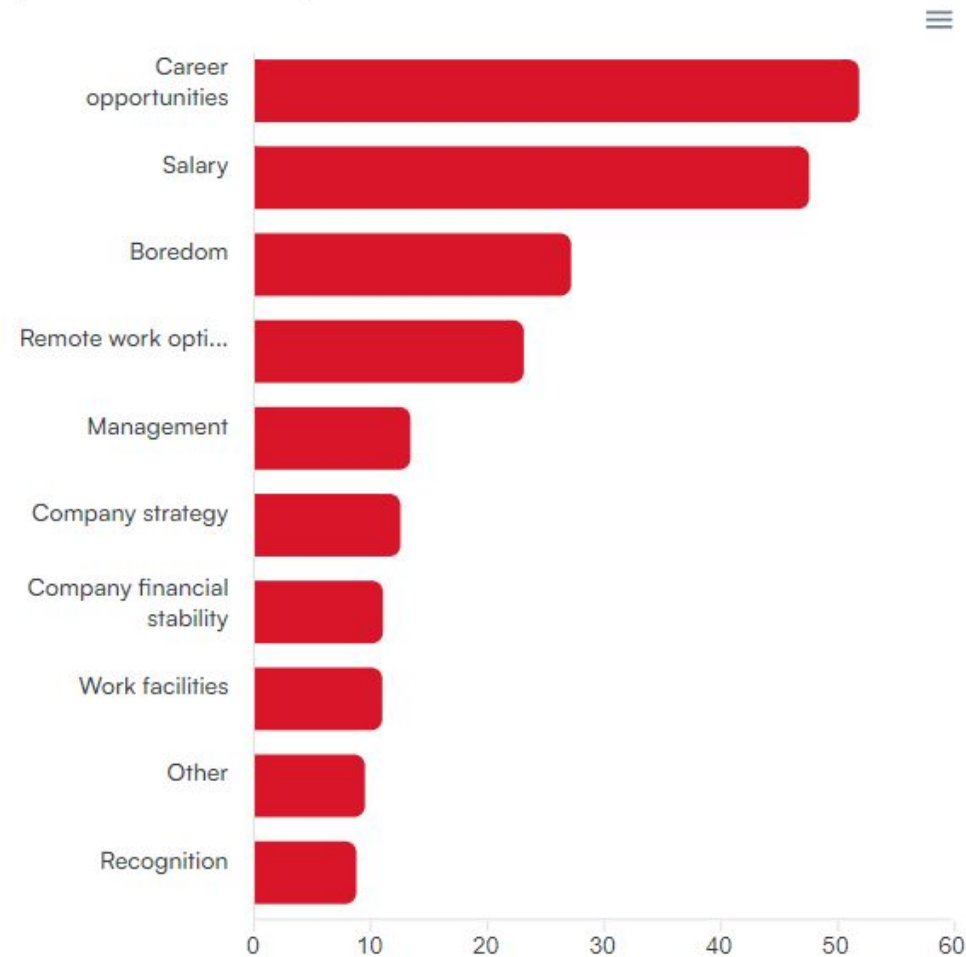
And the 12% of “none-of-the-abovers”? Quite possibly, they’re not entirely happy where they are, but they also don’t think it would be a good idea to quit. Maybe this is where the developers with shaken self-trust sit!

Why are developers considering resigning?

Those that are looking to go elsewhere, are mainly looking for **better advancement opportunities** and **higher salaries**.

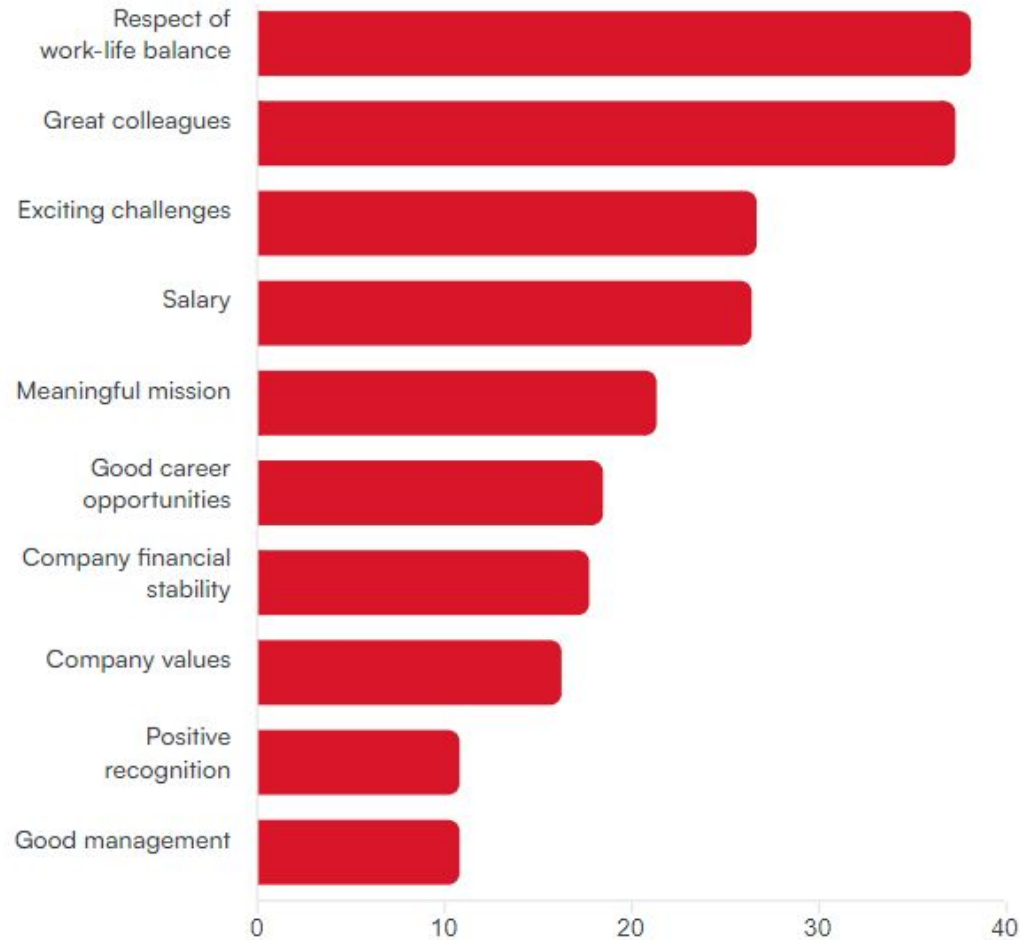
Why? Select your top reasons for changing jobs.

Respondents could select multiple answers.



What makes you stay?

Respondents could select multiple answers.



Actionable learning

They may come for the money, but they'll stay for the people and the passion.

While money is a motivating factor in finding a new role, companies looking for the key to retention might be surprised to see that salary doesn't even break the top three reasons developers stay in a job.

Work/life balance (38%), **great colleagues** (37%), and **exciting challenges** (27%) are what entice employees to stay put.

Moral of the story? Even if you're able to offer attractive salaries, you still need to put time and effort into building a caring, collective and exciting work environment.

1 in 4 companies offer a 4-day week.

Over a quarter of recruiters say that their company offers a 4-day week, and 11% are considering it.

Although developers view this as a “nice-to-have”, it’s proof that you can still innovate when it comes to flexibility and work.

There are a million ways to show developers that you care. Find out what really matters to your tech teams and candidates.

Does your company offer a 4-day work week?

Definition: total weekly working hours condensed into four days with no change to salary.



b. Hiring processes

AI insights

Hot take

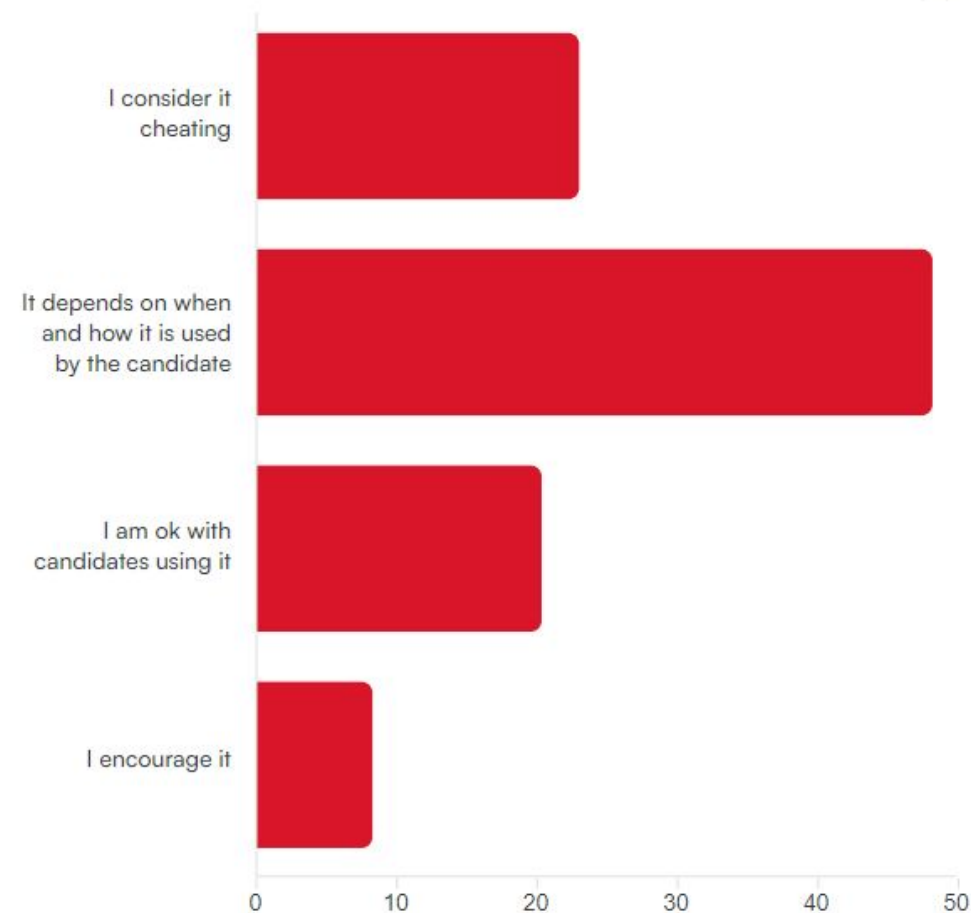
Recruiters are torn on how, when and if they want to see candidates using AI.

Despite the fact that **67% of developers are already using AI as part of their job**, there's some intriguing controversy around candidates' usage in the hiring process.

Close to one quarter (23%) of recruiters and hiring managers consider the use of AI by candidates cheating. Only 8% actively encourage it, and almost half (48%) say it's acceptability depends on usage.

We find it surprising that so few companies encourage the use of what's become an everyday development tool in the interviewing process. But, what do developers think?

What is your perspective on the candidate's use of AI during a technical test or coding interview?



AI insights

Are developers using AI in the hiring process?

Only **19%** of developers would openly use AI during the recruitment process.

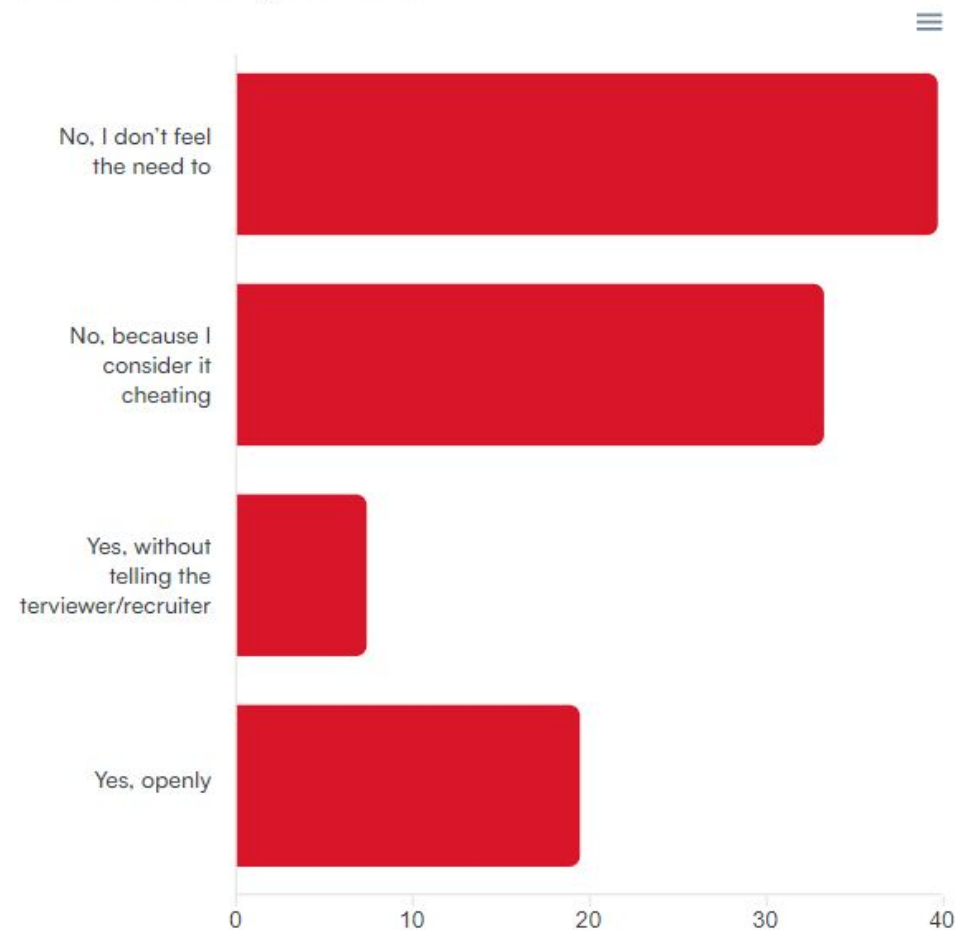
Shockingly, **a third of developers actually consider the use of AI during an interview or technical test to be cheating.**

Do they consider it cheating, because they know (or think they know) that companies consider it cheating? Or because they have high expectations of AI and its capabilities?

Will a broader **integration of AI in the recruitment process** influence this view? Time will tell.

Have you or would you ever use AI to help you answer questions as part of a technical recruitment process?

I.e. in an interview or during a technical test



Would you like to be able to freely and openly use AI within the recruitment process?



● Yes ● No ● I don't know

AI insights

Hot take

Mixed feelings on the future of AI and hiring.

Developers are decidedly torn on whether or not AI should be included in the recruitment process.

Our take? We've said it once and we'll say it again. **The technical hiring process should mimic an on-the-job coding experience**—and that includes tools.

How can you assess how a developer would perform on-the-job, without providing them with their usual on-the-job tools?

How long does it take to hire a software developer?

Recruiters and hiring managers say it takes them **an average of 5 weeks to hire a tech candidate.**

How does your company compare?

On average, how many weeks go by between your first contact with a candidate and their hiring?



Hot take

Live coding interviews for the win (but don't rule out take-homes!)

Recruiters and developers agree on the fact that **live coding interviews** are one of the most effective ways to assess a candidate's skills. **Technical tests with practical coding questions** also appeal to everyone.

But what's this? **Developers like take-home development projects too!**

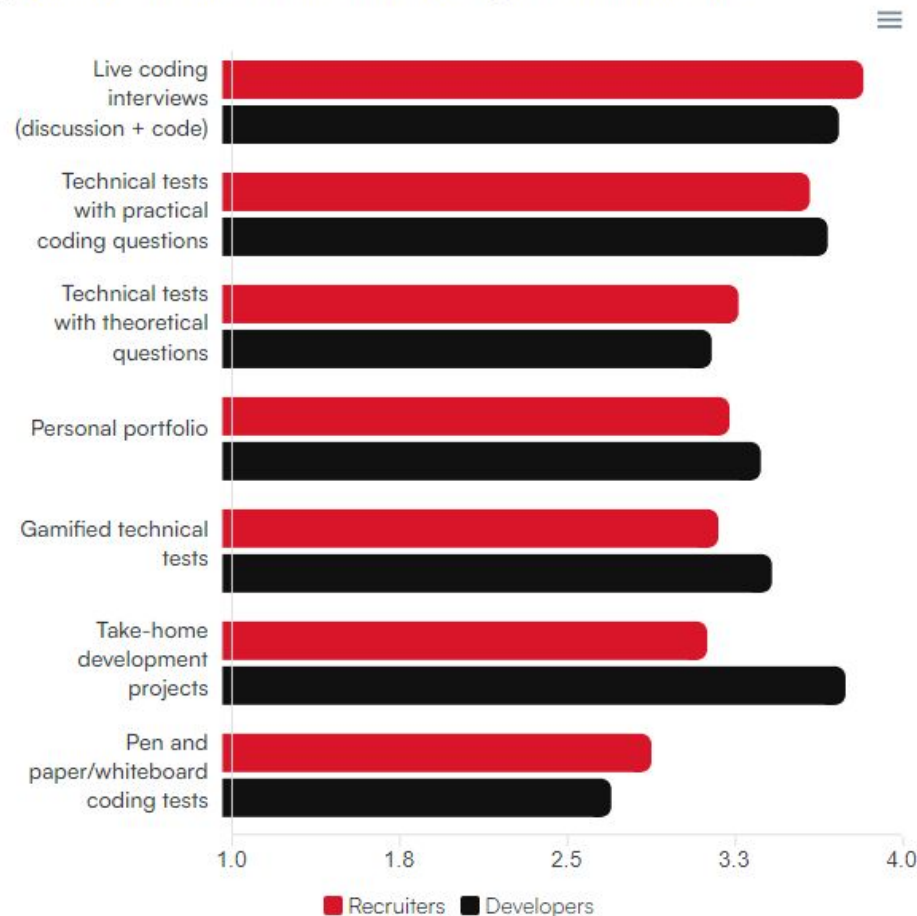
Take-homes can get some bad rep: too time-consuming, too irrelevant, too easy to "fake"... Still, developers gave this assessment method an average score of 3.75/5, making it their top choice this year.

Our bet is that they appreciate the flexibility, reduced pressure and added project context.

So, how can you start doing take-homes thoughtfully and effectively?

In your opinion, which assessment methods provide you with the most accurate view of candidates' technical skills?

Respondents provided a note between 1 and 5 for each method. 1: This method doesn't give a good read of candidates' skills. 5: This is the best way to assess technical skills.



Do you use ChatGPT or AI-assisted tools to help you hire for technical roles?

Examples: to help you draft interview questions, take notes, compare candidates, write emails, do industry research.



● Yes ● No

AI insights

Hot take

Recruiters have started using AI too.

Developers aren't the only ones using AI in their jobs. Over a third of recruiters and hiring managers say that they leverage AI-assisted tools to hire for technical roles.

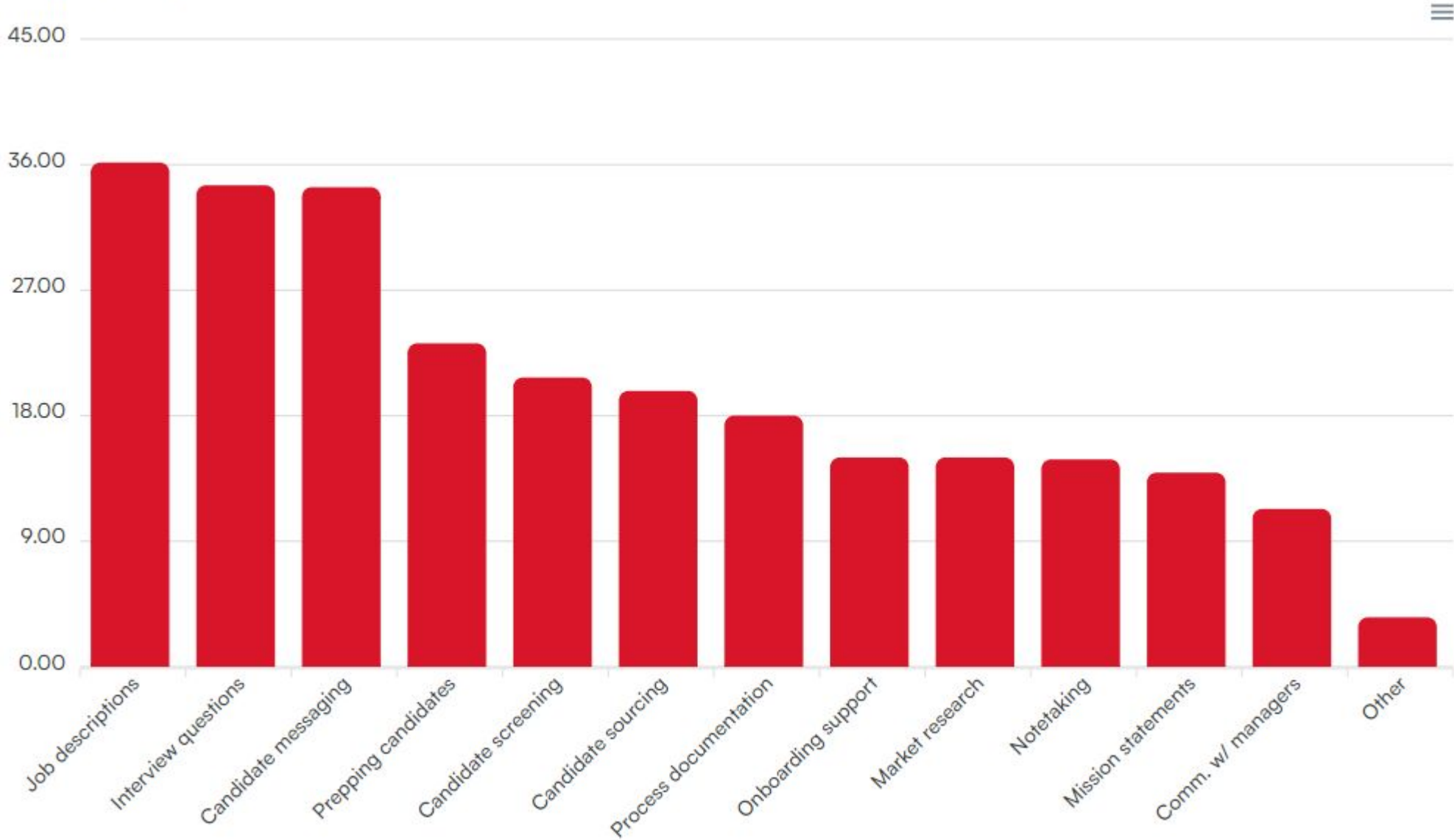
Top use cases include:

- Writing job descriptions
- Preparing interview questions
- Communicating with candidates throughout the hiring process

So to sum up: **67% of developers and 38% of recruiters are already using AI in their work.** And yet, we're only just seeing this impact the way we hire developers, with only 8% of companies encouraging the use of AI in their recruitment process.

Do you need to reevaluate the way you see AI, so as to remain relevant in your hiring approach?

Please specify what you use AI for:



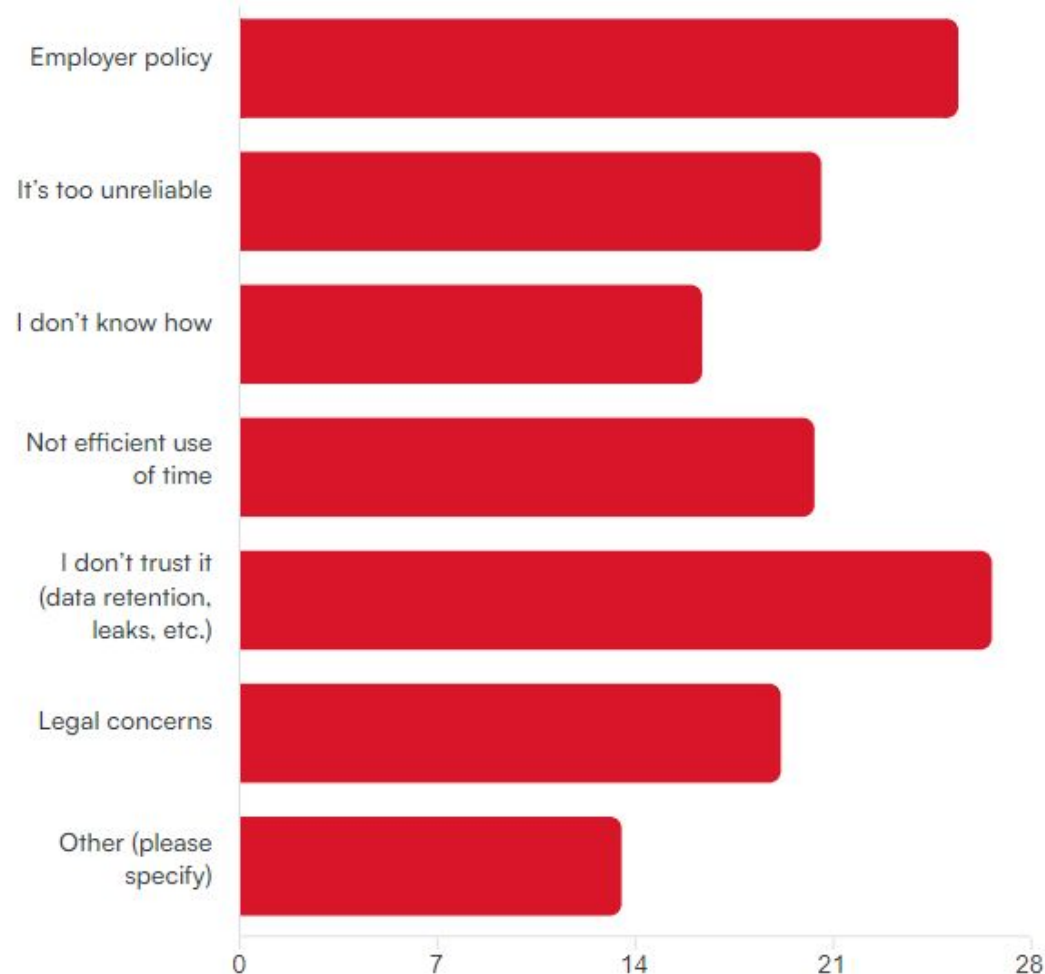
AI insights

Recruiters, AI and mistrust.

Despite the fact that HR tech providers have thoroughly embraced AI this year, some recruiters (just like developers) remain weary of this new technology.

When we asked those who don't use AI at work why that was, **mistrust and employer policy** were the top stated reasons.

If you don't use AI-assisted tools, please specify why:



03. What will tech hiring look like in 2024?

a. Tech recruitment goals and strategy

b. Top 2024 tech hiring challenges

c. Budget

TL;DR Organizations will invest in technical hiring in 2024, and recruitment goals are set to be slightly more ambitious than the past year. To achieve these goals, over half of hiring companies will be looking to source international talent.

Skills-based hiring will also play an important role, with 80% of companies open to hiring developers with non-academic backgrounds.

Indeed, the heat is on to build a bigger, more diverse talent pool, while managing costs. Recruiters predict hiring AI specialists and evaluating soft skills will be particularly challenging.

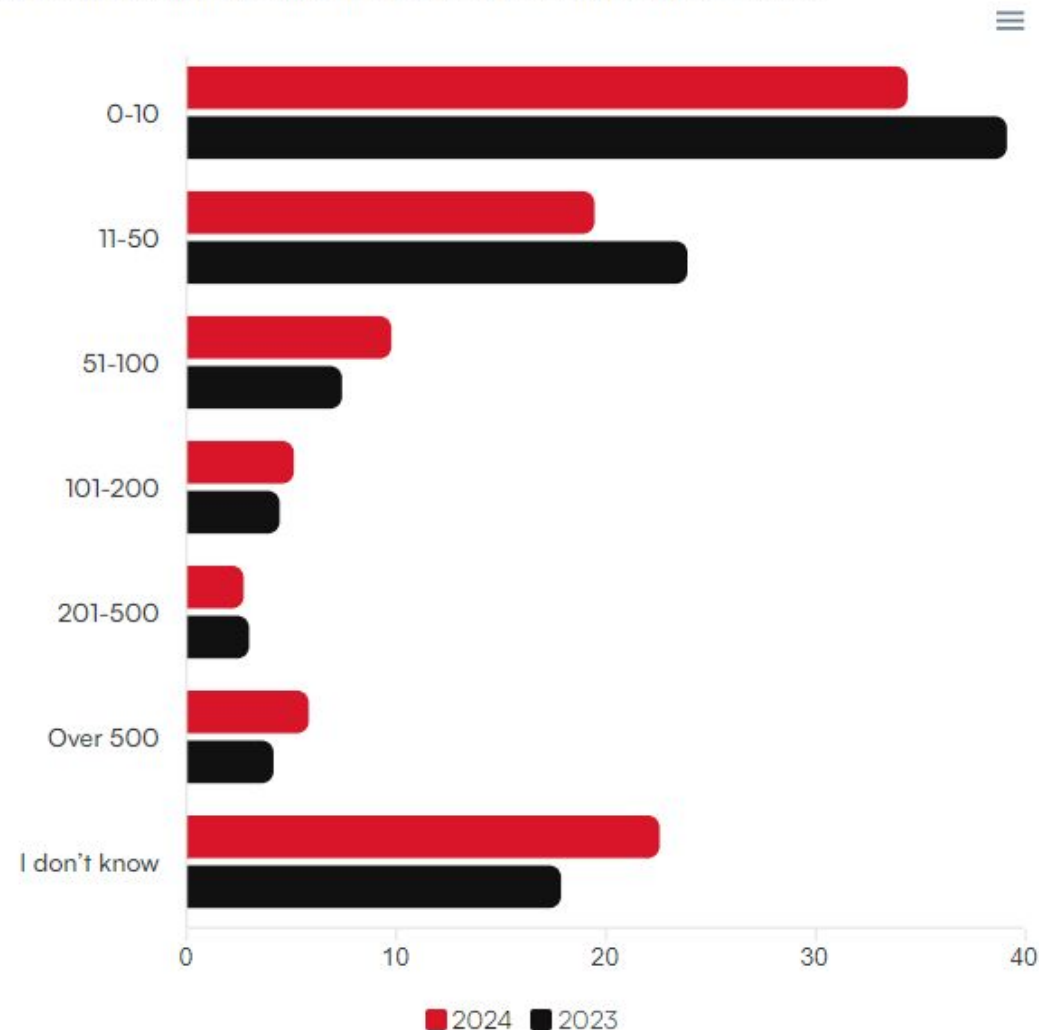
a. Tech recruitment goals and strategy

The pace of hiring is picking up (slightly).

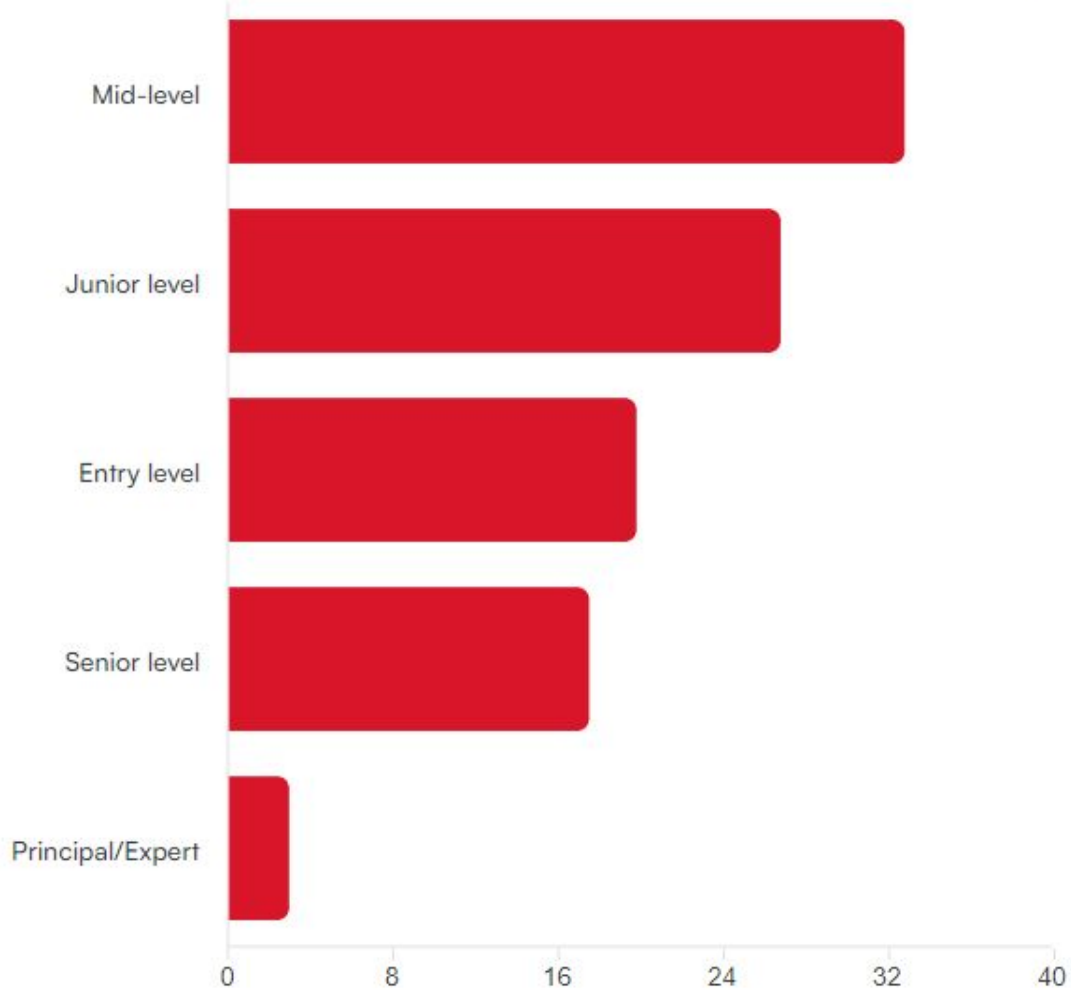
This year's hiring goals are slightly more ambitious than last years.

In 2022, 35% of companies were planning to hire over 50 developers. 2023 goals were slightly more timid, with only 23% of companies hiring at that volume. This year, ambitions are picking up again, with **30% of respondents saying they plan to hire more than 50 devs in 2024.**

In 2024, how many technical people does your company plan to hire?



What type of profile are you hiring most of?



Wanted: mid-level and junior developers.

Recruiters are mainly looking for **junior to mid-level engineers**.

Indeed, organizations have shifted their priorities in the past year and have less demand for senior developers.

Last year, 31% of recruiters were looking to hire senior profiles. This has dropped to 18% this year.

This may be because they've filled those open senior positions, or perhaps this is related to budget constraints.

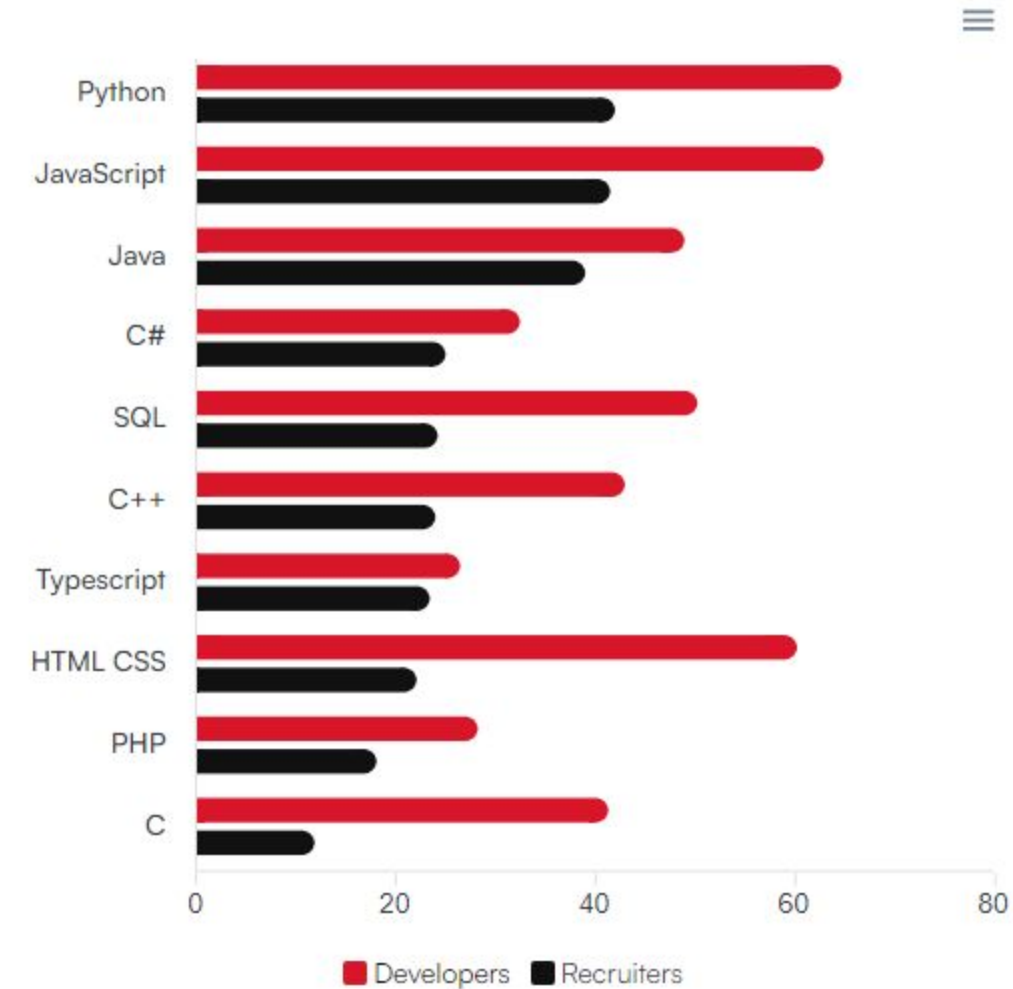
Python, JavaScript, React and Node.js in the top spots.

Python and JavaScript are both the best-known and the most sought after programming languages.

As for frameworks and environments, **React and Node.js** are the most coveted.

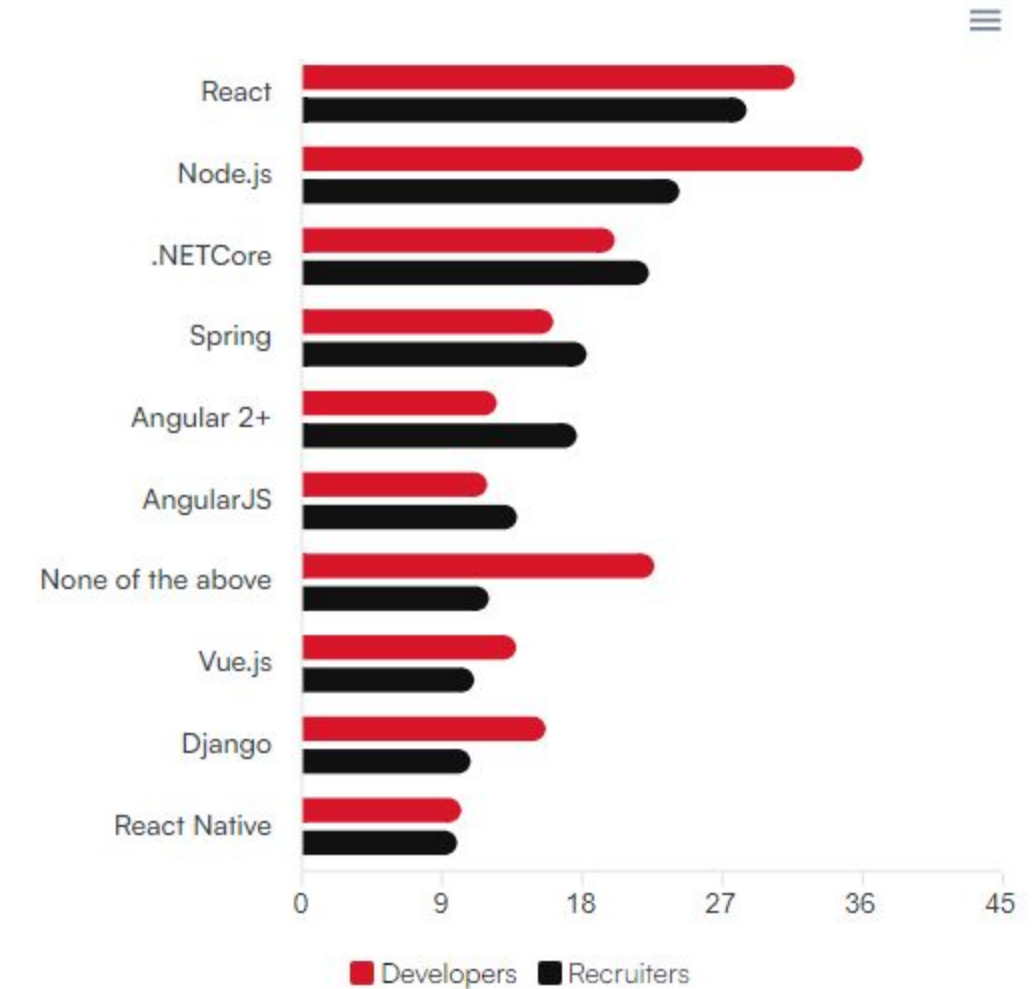
Best-known vs. most in-demand programming languages

We asked developers "Which programming languages do you know?". We also asked recruiters "Which programming languages does your company have high demand for?". Respondents could select multiple answers.



Best-known vs. most in-demand frameworks

We asked developers "Which frameworks do you know?". We also asked recruiters "Which frameworks does your company have high demand for?". Respondents could select multiple answers.



Does your company hire contingent workers for tech needs?

I.e. freelancers, independent consultants, contractors, part-timers, on-call workers, etc.



The gig economy seems to be losing speed.

Last year, post-pandemic, we noticed two things: the number of freelance developers increased, and there was a notable boom in companies turning to external contributors (63%).

This year, **57% of recruiters stated that their company hires contingent workers** for their tech needs.

Is this linked to the fact that in-house recruitment seems to be picking up? Maybe budget is being allotted elsewhere? It will be interesting to see how this trend affects hiring in 2024.

Over half of organizations source technical roles internationally.

An increasing number of **companies are looking abroad for tech talent**. In 2022, 40% of recruiters said that they hire internationally. That number has risen to 51% this year.

Sure, refined remote policies make this possible. But maybe the current fervor for skills-based hiring is also facilitating this trend?

When skills are placed at the center of recruitment strategies, other defining factors are put into perspective, barriers are lifted.

Do you or your company source technical roles outside of your country?



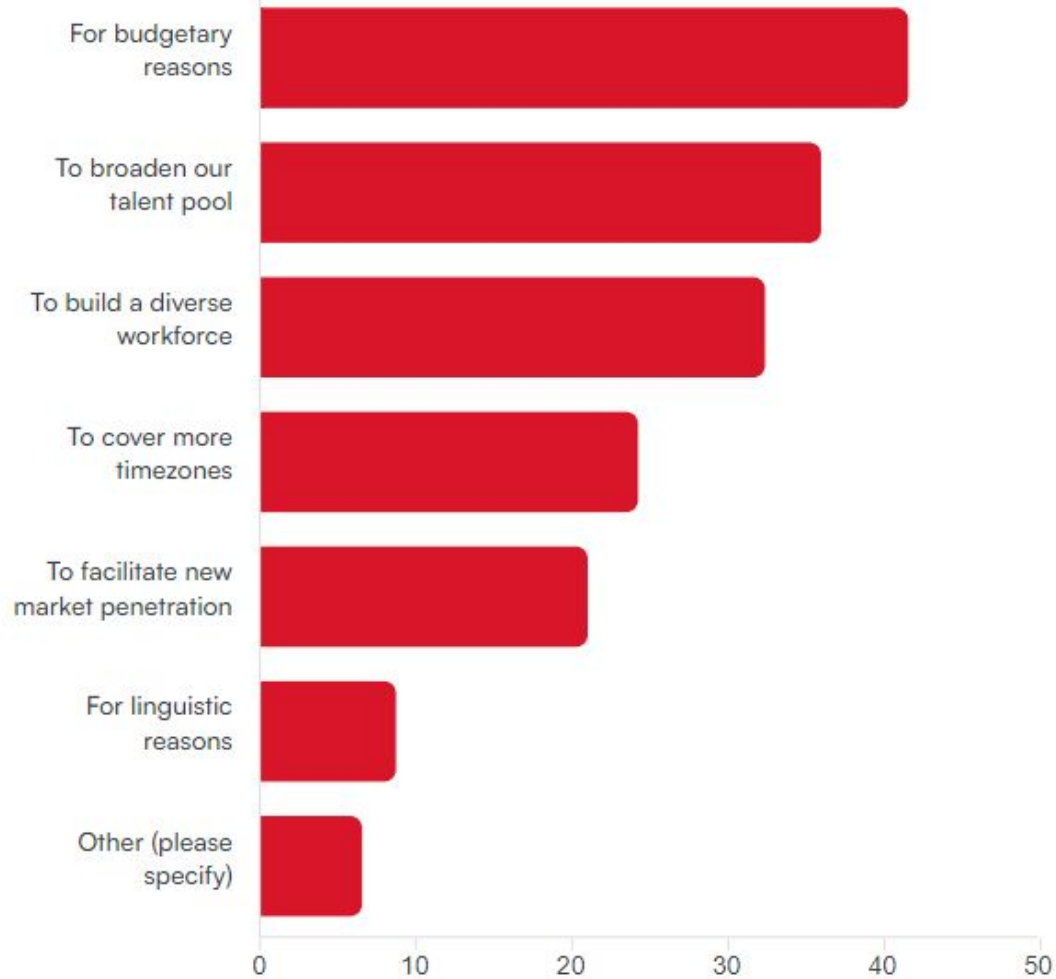
● Yes ● No ● I don't know

“

Hiring based on skills instead of factors like college name or the candidate's geographic location will bring stronger, more diverse talent to the table.

Amanda Richardson, CoderPad CEO

If yes, why?



Why? It's about building a bigger, more diverse talent pool, for less.

Those that source technical roles outside of their country say that they do so for a number of reasons.

The top motivator is **budget**, stated by 42% of respondents. Recruiters also outsource to **increase the size and diversity of their talent pool**.

Indeed, finding qualified candidates is the top cited hiring challenge, year in, year out. Sourcing internationally is one way to cast a wider net, while managing costs.

Hot take

The majority of companies hire developers with non-academic backgrounds.

A few years back, we saw a leap in the number of **companies hiring developers with non-academic training.**

Between 2021 and 2022, the number of recruiters hiring from this pool just about doubled.

However, since then, we've seen very little change.

In 2024, as a growing number of recruitment professionals ditch degree requirements, and share the benefits, will those last 20% be swayed?

Do you recruit developers with non-academic backgrounds?

i.e self-taught, bootcamp, MOOC, short-term training course, etc.



● Yes, regularly ● Yes, but rarely ● No

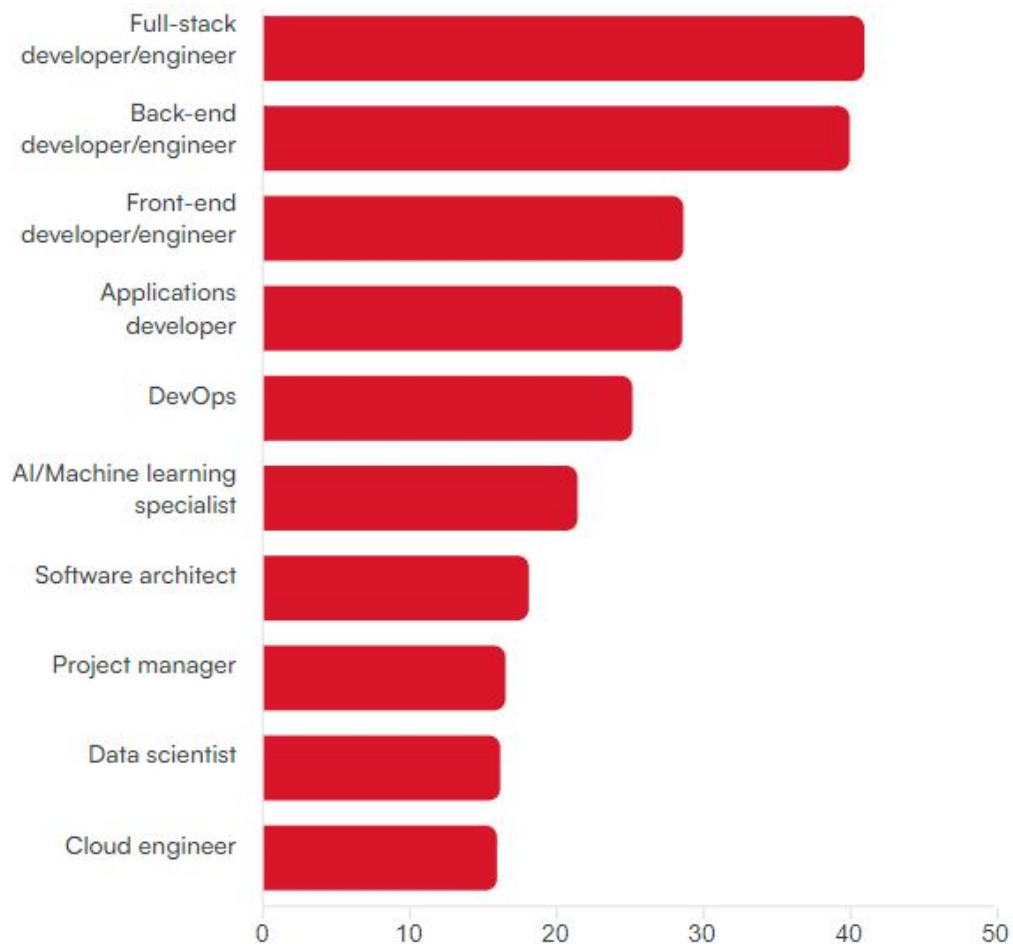


Moving from a pedigree to a skills-first approach is a new but intelligent move for keeping pace with what the job market now demands.

Matthias Schmeisser, Global director, talent acquisition & employer branding, emnify

Which technical positions are you looking to hire for in 2024?

Respondents could select multiple answers.



Full-stack and back-end developers are still the most sought-after engineers.

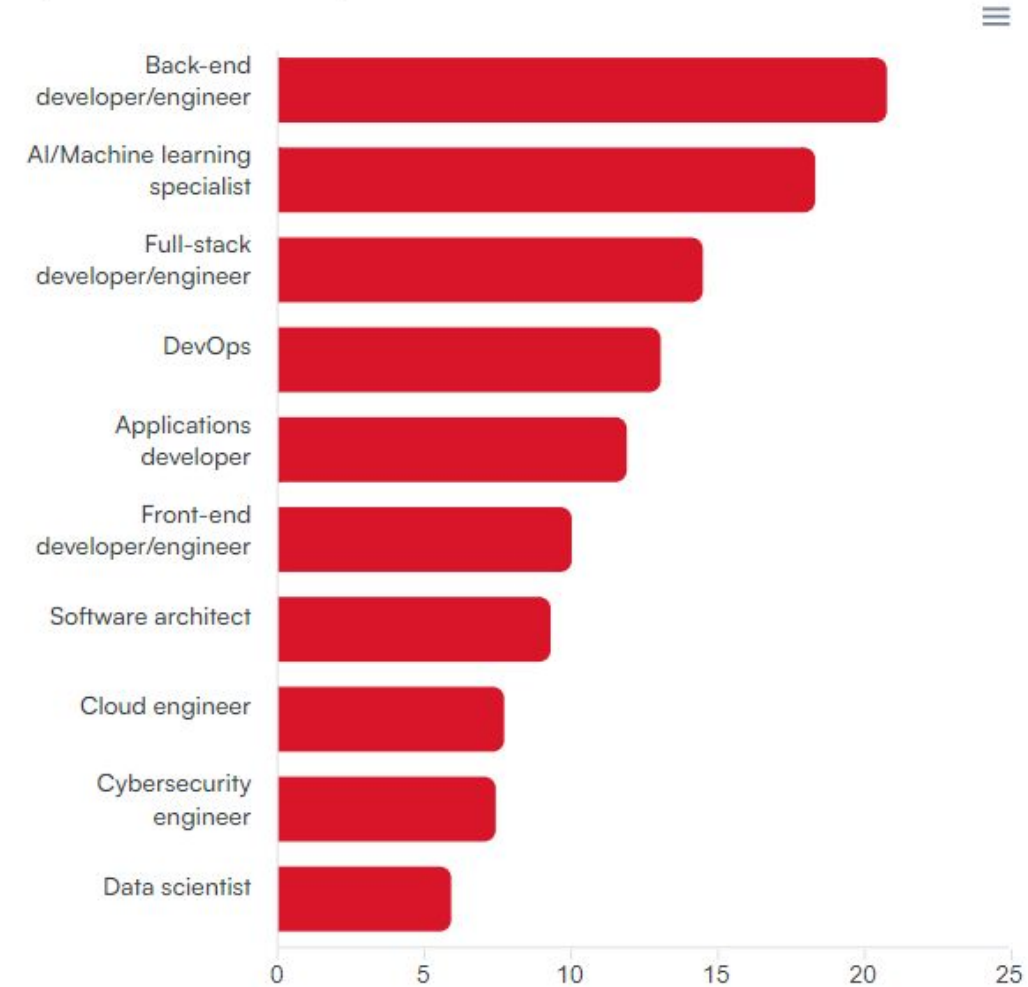
If we've learnt anything from the past 7 years of surveying our developer and recruiter communities, it's that **full-stack, back-end and front-end developers** will always be in high demand.

But, what's new? It looks like companies are looking to better understand and further explore AI in 2024. 21% of recruiters are looking to hire **machine learning/AI specialists**, vs. 18% last year.

Are they optimistic and excited about how AI could enhance their business? Or are they feeling the pressure to "keep up"?

Which positions do you think you'll struggle to recruit for in 2024?

Respondents could select multiple answers.



The heat is on to hire AI specialists.

As mentioned above, demand for machine learning and AI specialists is on the rise—and recruiters are in the hot seat!

For the first time ever, **AI specialist positions** have made the podium for the most difficult roles to fill. This new challenge has knocked full-stack roles down to third place, after multiple years in the top spot.

Fortunately, 34% of developers are eager to learn more about machine/deep learning this year. Maybe upskilling internal team members is the answer?

b. Top 2024 tech hiring challenges

Hot take

Soft skills are considered just as important as hard skills.

Think that only HR professionals value soft skills? And that engineers only value hard, technical skills?

Think again.

A whopping 78% of developers and 81% of recruiters say that **soft skills are at least as important as hard skills when it comes to software engineers.**

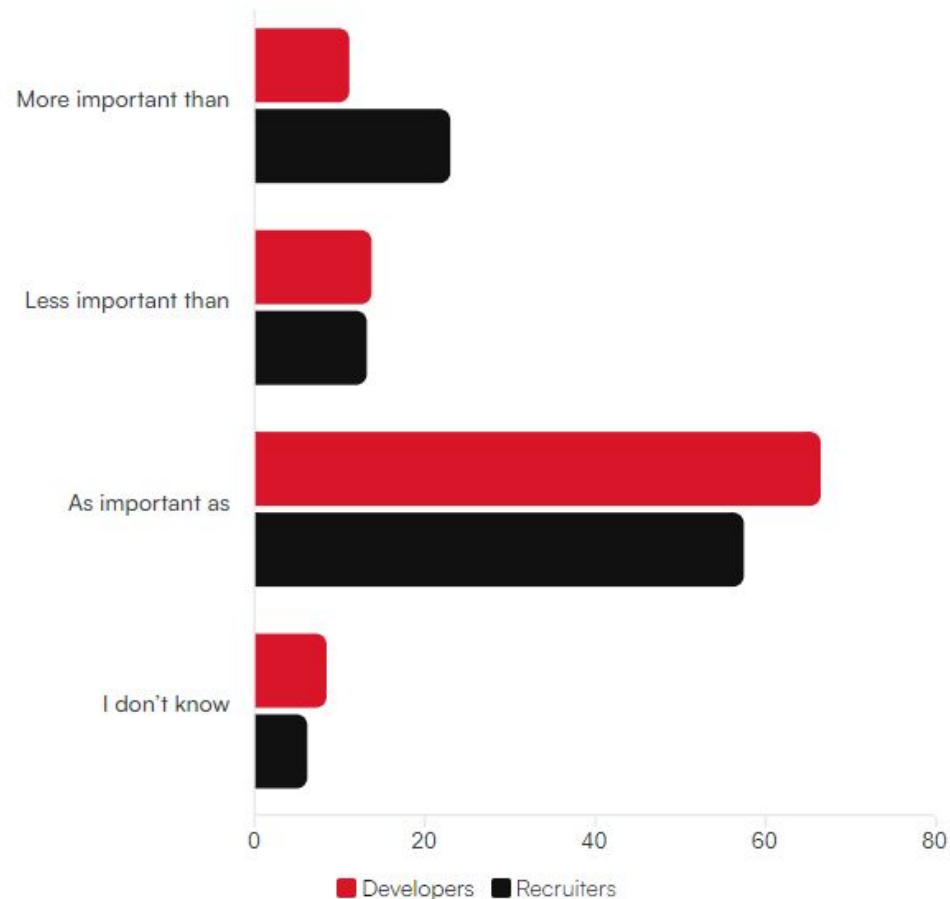
Yes, soft skills matter.

For developers, the challenge is knowing how to showcase those skills.

For recruiters, getting better at defining and assessing those skills will be key for 2024.

When it comes to software engineers, do you consider soft skills to be more or less important than hard (technical) skills?

Soft skills are _____ hard skills.



How can you hire qualified developers, if you can't find qualified developers?

Recruiters highlighted the same top 2 challenges this year as they did last year:

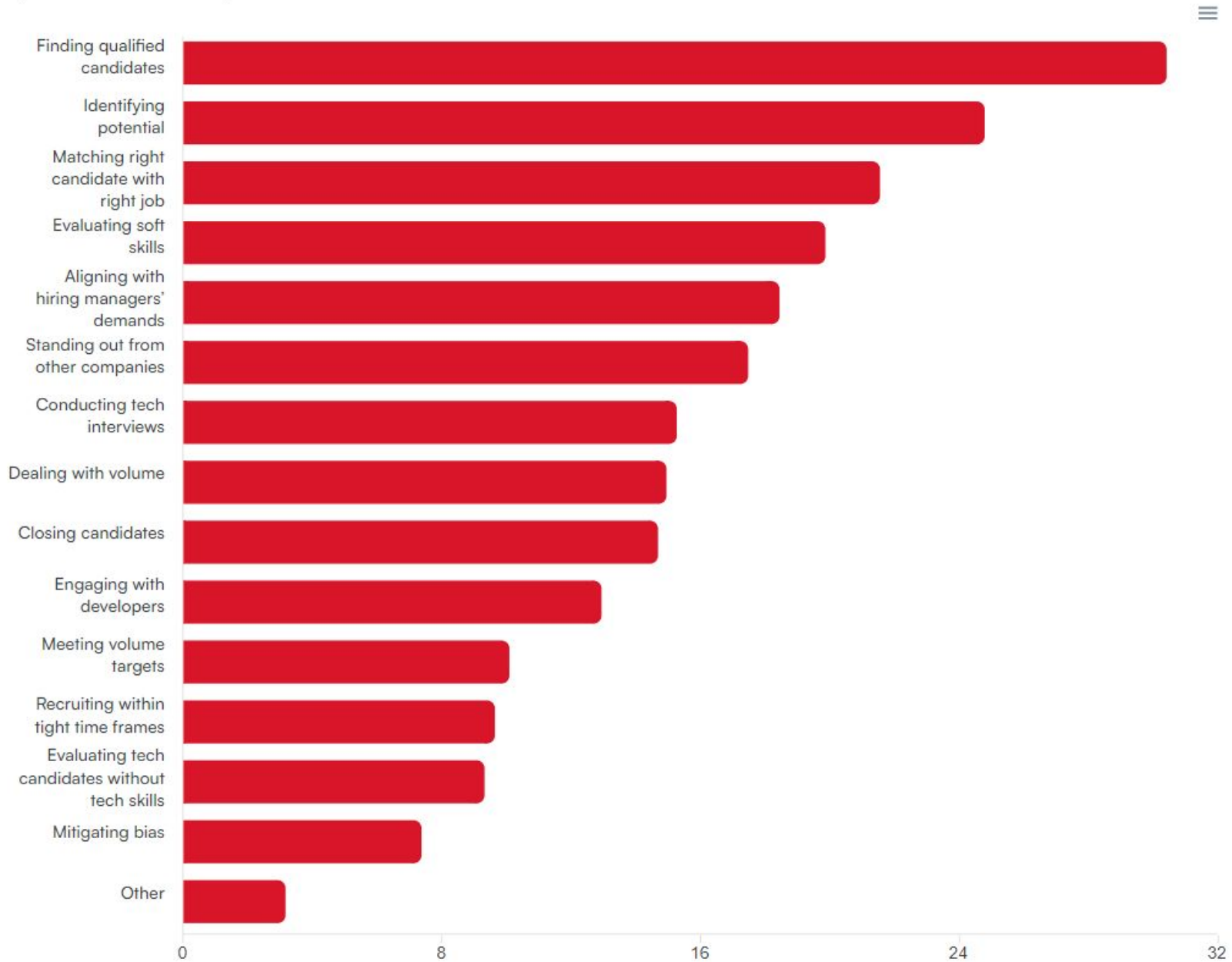
- **Finding qualified candidates**
- **Identifying potential**, even if candidates don't have the perfect matching skillset

Identifying potential may have become a little easier, with less respondents pinning it as a top challenge this year vs. 2023 (down 4%). There's a good chance that recruiters have better tooling, but there's still room for improvement.

We also see that soft skills are decidedly tricky to assess. 1 in 5 recruiters say it's the hardest part about hiring developers.

What are your main challenges when recruiting for technical roles?

Respondents could select multiple answers.



c. Budget

Hiring budgets aren't frozen.

About one quarter of tech recruiters will have **more budget to recruit for technical roles in 2024** vs. last year.

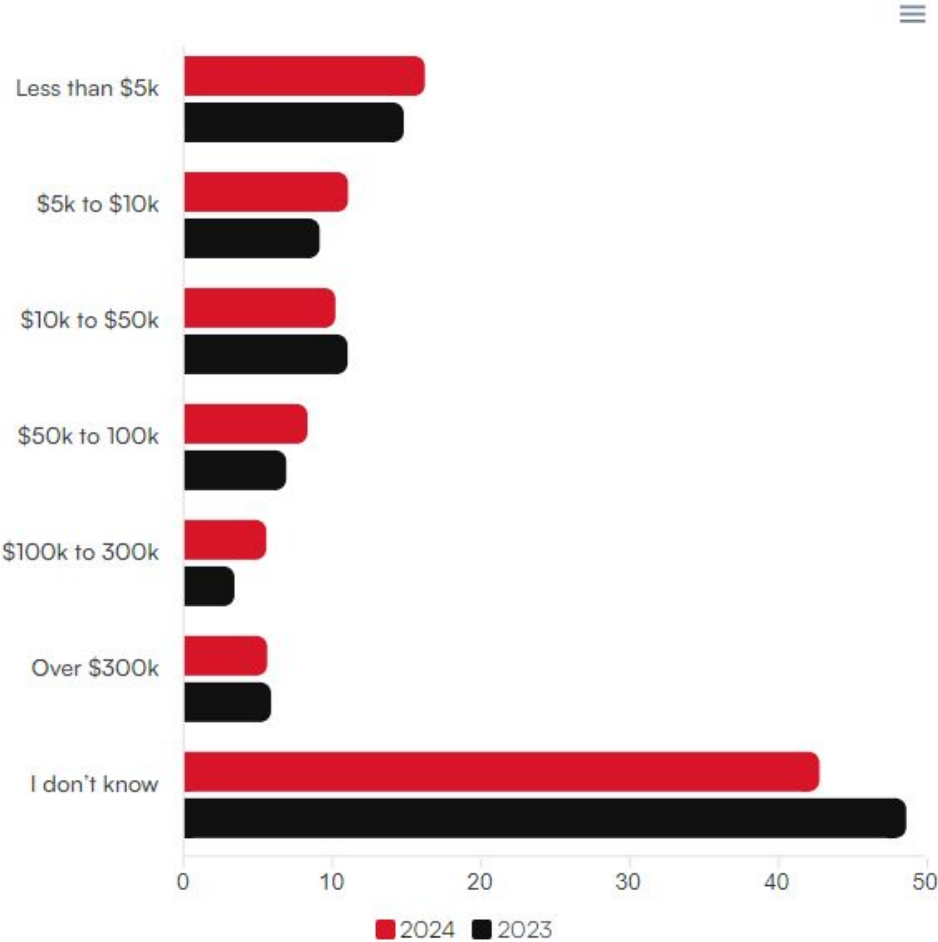
17% say they have the same envelope as last year and 14% say they have less.

The remaining 44% either aren't yet clear on their 2024 budget, or aren't sure how it compares to 2023.

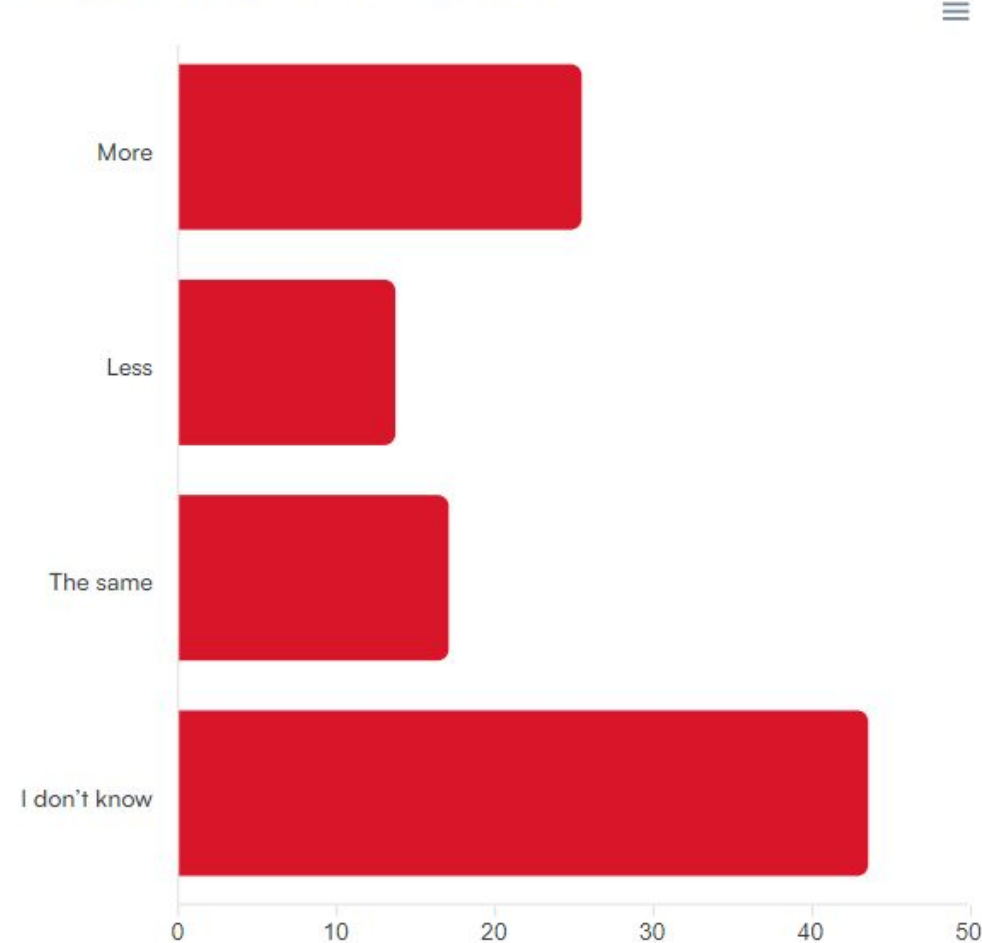
This data shows that, for the most part, companies are still investing in their technical recruiting.

What is your organization's estimated 2024 annual budget* for recruiting technical roles, in dollars?

*Any internal or external costs (tools, job boards, agency fees, etc.) related to hiring — excluding recruiters' or developers' salaries.



Is this more or less than last year's budget (2023)?



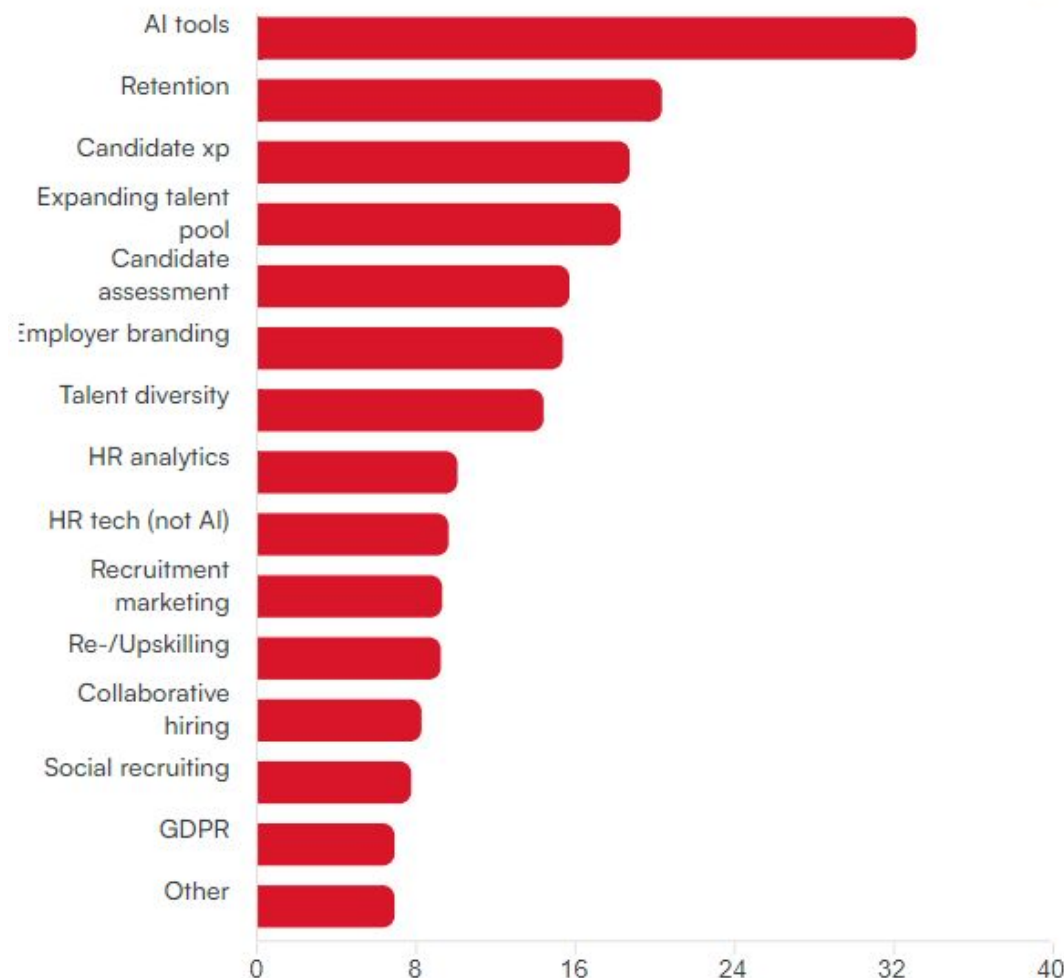
AI insights

Companies will invest in AI in 2024.

AI tools are, by far, the number one thing that companies plan to invest in, when it comes to their HR efforts.

We're on the edges of our seats, excited to see how AI will impact processes, products and teams.

What does your company plan to invest in/develop in 2024?



Survey demographics

We gathered feedback from over 13,000 developers from 149 different countries, with diverse professional and personal backgrounds.

Although many student coders took part in our survey, our developer community was mostly representative of professionals working in various positions and industries.

IT services was the most common industry and full-stack developer was the top represented tech position.

We also surveyed roughly 5,500 people who hire technical profiles as part of their job. Respondents came from 143 countries, with varying professional experience and responsibilities.

[Visit our online report](#) for more detail.



Let the skills say it all.

