

# Hack

the process  
of recruiting  
programmers

[with a Case Study]



A secret formula used by 4%  
of the companies recruiting  
tech talent

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Did you know that hiring a developer can cost you up to \$65,221 in the recruitment agency fees, management time, and productivity loss?



That's almost as much as buying a new BMW M3 for every technical hire you make.

In fact, hiring the top technical talent is a challenge universally faced by recruiters and since you're reading this, probably by you. Given that even non-technical companies now need developers to grow, the level of competition is fierce. In order to consistently hire people who fit your organization and have the right skills, you need to follow a process you can easily replicate and optimize.



At Devskiller, we've spent years working with technical recruiters and software developers from companies including Accenture, PwC, Tata Consultancy Services, ING, and many others, which has given us a unique perspective on the relationship between these two very different professional groups. Based on our experience, we wrote a book devoted to hiring the best software developers entitled *IT Recruitment Process That Works. Proven strategies, industry benchmarks and expert intel to supercharge your tech hiring*. To help you optimize your IT recruitment process as fast as possible, we've decided to present the most actionable advice in this ebook.

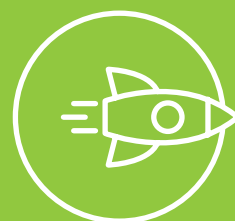
**We have found the solution to hiring the best tech talent and we're sharing it with you. In this ebook, you'll find:**

→ **a proven formula** to streamline your recruitment process used by the most successful recruiters around the globe

→ **a high-impact case study** illustrating how one of our clients, Allegro, managed to cut their Time-to-Hire by 50% and improved the effectiveness of their preselection process by 40%



It's about time you take action and start hiring developers the way industry leaders do.





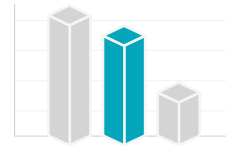
## CHAPTER 1:

# Is technical hiring broken?

Because the pool of qualified candidates with suitable tech skills isn't growing as fast as the market, the level of competition in IT recruitment is stiff. In fact, IT workers constitute the **second hardest professional group to recruit** and **"40% of global employers report talent shortages."**

With each passing year, it will become harder and harder to find technical talent including engineers, programmers, DevOps, database analysts, and mobile developers who are often hard to identify within your candidate pool.

IT workers are the **2nd hardest group** to recruit globally



Source: ManpowerGroup

A lot of time is wasted on reviewing the resumes of unqualified candidates as well as searching for qualified ones (or at least ones with impressive resumes). The truth is, resumes and resume writing skills, in general, can be misleading because they have nothing to do with coding skills. To be fair, most of us have probably unknowingly rejected viable candidates who simply weren't great at advertising their skills on their resumes. The best way out of this conundrum is to assess tech skills early in the recruitment process so no viable candidate is mistakenly eliminated. You're probably thinking this is way too expensive, right? The truth is that not only is it affordable, not assessing your candidates' skills will cost you much more in the long run. More on that later!

### **Recruiting and hiring programmers is not a one-man job; it requires teamwork.**

The whole company has to work hand in hand in order to hire the best software developers it needs so badly to grow. The best tech candidates are hired on the spot so it's essential to bring them in as quickly and efficiently as possible. It is impossible to do this without the right skill screening software.



## Recruiting programmers requires a group effort where a company's departments need to work side by side



### The HR Director

HR Directors are responsible for developing strategic solutions in order to streamline the whole recruitment process in the very competitive IT market. They make sure that their teams recruit in an easy, quick, and effective way. But their biggest pain point is that the company is always thirsting for more tech talent, relying on more and more skilled IT professionals to grow.



### The Tech Recruiter

Tech Recruiters play a crucial role on the front line of the recruitment process. They are mainly responsible for hiring top performers who will increase ROI and help the company cement a competitive advantage. They typically face many challenges, such as:

- keeping the talent pipeline full
- reviewing the resumes of unqualified applicants which takes a lot of time and effort
- prescreening the coding skills of candidates based on technical expertise not all recruiters possess
- conducting phone interviews and checking references
- organizing interviews with candidates
- nurturing and notifying candidates at every stage of the recruitment process



### The Senior Developer

CTOs, Tech Leads, and Senior Programmers always have their hands full. As if managing an IT team and meeting deadlines with programming projects wasn't enough, the IT department is often responsible for assessing the technical skills of new candidates because they are the only ones that have the skills and the know-how to do that. They often feel frustrated because they have to waste their time on weak candidates over and over again. Obviously, this creates bottlenecks on two different fronts: slowing down their own work as well as the work of the HR Department.

In order to attract top tech talent, you need to develop a proactive, quick, and cost-effective recruiting strategy which is virtually impossible if these three professional groups don't cooperate.





## CHAPTER 2:

# The four major goals of a successful Tech Recruiter

It's pretty obvious that companies want to hire the best software engineers. For tech recruiters, this means that they have to act quickly and stay effective throughout the whole recruitment process. Firstly, tech talent gets hired quickly, so a fast recruitment process helps you get in an offer before your competitors do. Secondly, the faster you fill your open positions with valuable employees, the faster your company returns to maximum productivity.

In IT, time really is money because an unfilled tech position costs **\$500 a day**. Given that it takes 43 days to hire a software engineer, keeping the position vacant for that long adds up to \$21,500. Moreover, in the 43 days it takes you to hire a dev, the cost of your lost productivity may add to \$33,251. You might be tempted to settle for someone who doesn't meet all your criteria just to avoid these costs, but remember that hiring the wrong developer comes with a number of negative repercussions. As a consequence, making a bad hire is associated with facing an even higher cost, so it's definitely not a way out of this conundrum. In other words, figuring out whether or not someone has the right skills to do the job can REALLY save you a ton of money.

## TIME IS MONEY



is how long it takes to fill a new position

During this time your productivity loss can reach **\$33 251** and additionally the cost of recruitment can amount to **\$31 970**.

\*according to Wanted Analytics

In order to hire tech talent, recruiters set objectives for each stage of the recruitment process. Achieving each of these objectives leads to an overall better end result: hiring strong tech professionals who will help your company gain a competitive advantage.



## 1. SOURCING

### GOAL

identify valuable candidates

Due to the shortage of and high demand for tech talent, recruiters reach out to active and passive candidates. In fact, **84% of developers are passive candidates** so if you only focus your efforts on people who find you through job ads, you're missing out a huge part of the talent pool. What is more, you need to make your sourcing skills impeccable to access candidates who don't show up in the most basic searches.

## 2. SCREENING

### GOAL

select all the candidates that can perform the job well

Considering the level of competition for tech talent, recruiters cannot miss even a single valuable candidate. The global tech talent shortage means that you should assess the coding skills of all (yes, ALL!) of your candidates because you cannot afford to misjudge a single one; it would cost you way too much money. You're probably thinking it's impossible to do this quickly and efficiently, but we've got a proven formula for doing so.

This stage is exceptionally important because it determines how many people you invite to an onsite interview. The earlier you assess coding skills in your recruitment process, the shorter your Time-to-Hire is.

### 3. INTERVIEW

#### GOAL

cut down on the time spent by internal devs and recruiters on interviewing weak candidates

Usually, companies invite a large group of lightly screened candidates to an onsite interview or at least to a phone interview, where a technical person from the company verifies their skills. This way of assessing technical skills is highly inefficient and unscalable because it puts too much strain on the IT staff who are typically knee-deep in work. You simply can't afford to do it like that.

### 4. OFFER & 5. HIRE

#### GOAL

improve the Offer Acceptance Rate

In the ideal world, every successful candidate who is presented with an offer will accept it. In reality, however, a potential employee is highly likely to reject the offer. According to [MRINetwork](#), more than 50% of offers are turned down because of the level of compensation or a competing job offer. When this happens, you are typically forced to select a candidate who wasn't your first choice or start over, both of which can be detrimental to your results.

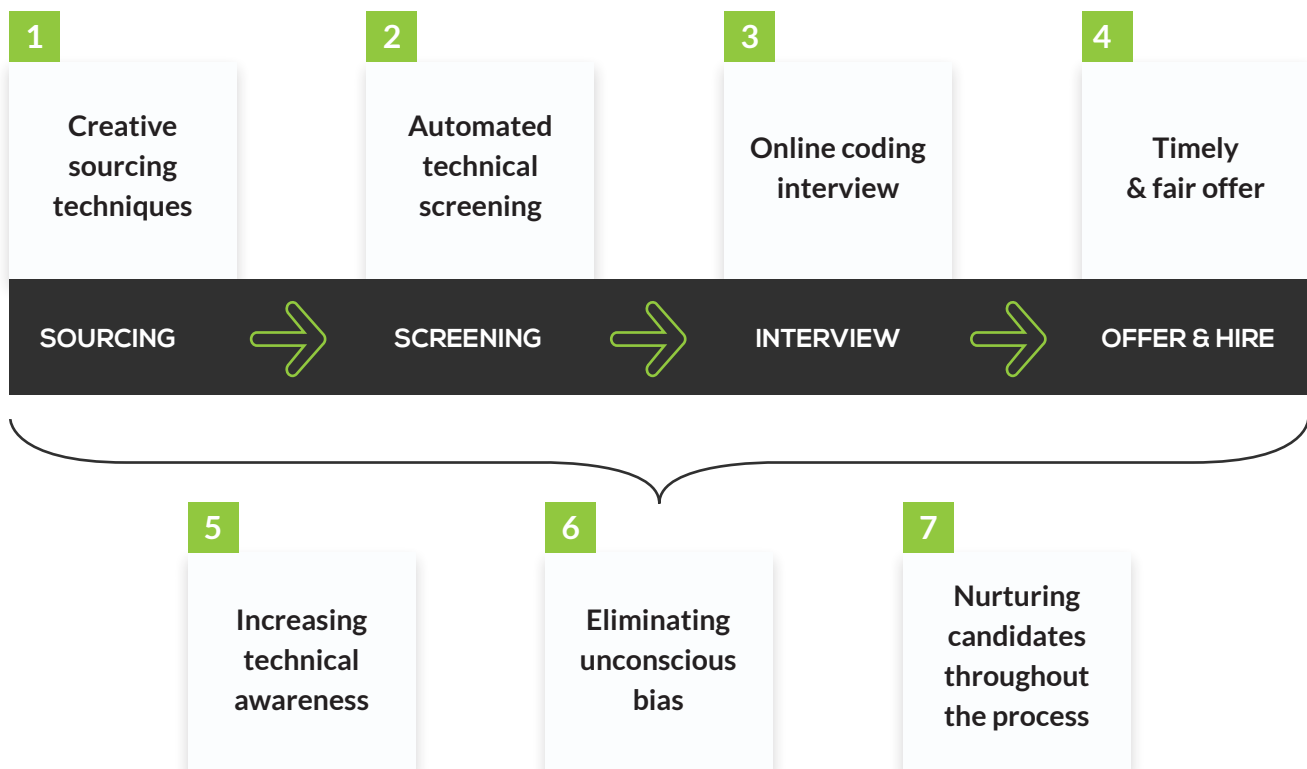




## CHAPTER 3:

# The seven-step formula to win over tech talent

There's never enough time or resources to do everything 100% the way you'd like. Sometimes there's neither. Regardless of your recruitment budget and the size of your company, the best way to streamline your technical hiring process is to follow this proven seven-step formula used by our customers. Although some of the following steps should be applied at a particular stage in the process, their benefits are manifold and extend well beyond that stage. For example, understanding technical terminology can be used while sourcing in order to be more precise, as well as during an onsite interview. Here is the seven-step formula you need to win over tech talent:



**STEP 1****Use creative sourcing techniques**

Being able to identify candidates who only get email messages from the most skilled recruiters gives you a competitive advantage over other companies. Bear in mind that some software engineers don't use certain terms (e.g. "Java developer") on purpose so they don't appear in the most basic searches and are identified only by top recruiters.

If you want to get better at sourcing developers, we've written an ebook (100+ pages!) entitled *Source software developers like a PRO*. Industry insights, expert advice and hard data to jumpstart your IT sourcing. The ebook is part of our free [Tech Recruitment Certification Course](#) which we wholeheartedly recommend if you want to boost your hiring results quickly.

Remember to personalize your outreach messages as much as you can. Developers hate being pitched positions which have nothing to do with their area of expertise or require more or less experience that they have. If there's one thing bound to make them ignore you, it's definitely a lack of personalization.

**STEP 2****Automate technical screening early in the recruitment process**

Assessing the technical skills of your candidates automatically before inviting them to an onsite interview allows you to limit the number of unnecessary interviews in your organization. It also helps you discover underdogs who you would have otherwise missed and eliminate candidates whose resumes hide the fact they don't possess the skills necessary to perform well.

**STEP 3****Offer online coding interviews**

The inability to predict whether a candidate has the right technical skills to perform well is, without doubt, the biggest roadblock in technical recruitment. Developers are fed up with whiteboard coding interviews and algorithmic questions which don't do their skills justice and don't give candidates the first idea of what they will be doing when they are hired. We looked at the subject of screening technical skills more closely later in this chapter.

**STEP 4****Make your offers fair and timely**

If your process drags on and you don't present the candidate with an offer fast, someone else will. Make sure the salary and terms of the agreement are fair and in accordance with industry standards.

**STEP 5****Increase your technical awareness**

As a Tech Recruiter, you need to know your Java from your JavaScript. Technical awareness helps you get better sourcing results and become more confident when communicating with your candidates.

To give you a helping hand, we've compiled a [glossary of IT terms](#) which explains some of the most basic terminology Tech Recruiters must understand and use comfortably.

**STEP 6****Eliminate unconscious bias from your recruitment process**

Unconscious bias leads to building non-diverse teams which are typically less productive and creative than diverse ones. There are a number of ways to [alleviate the impact of unconscious bias on the recruitment process](#). These include using anonymized skill screening software, introducing multiple touchpoints, and hiring by consensus.

**STEP 7****Nurture your candidates throughout the entire process**

Staying in touch with your candidates and notifying them of their status helps create a positive candidate experience and prevents candidates from dropping out of your tech recruitment cycle.

## **The importance of screening tech skills efficiently**

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Like we've said, establishing whether someone has the right set of technical skills to do the job well is the biggest roadblock to technical recruitment.

There is, however, a surefire way to remove this barrier from your hiring process. It comes in the form of Devskiller. Devskiller is a powerful tool to test developers' skills in a fast and effective way. Our platform supports Tech Recruiters at the screening and interview stage and the positive effects it brings about allow you to streamline your entire recruitment process.

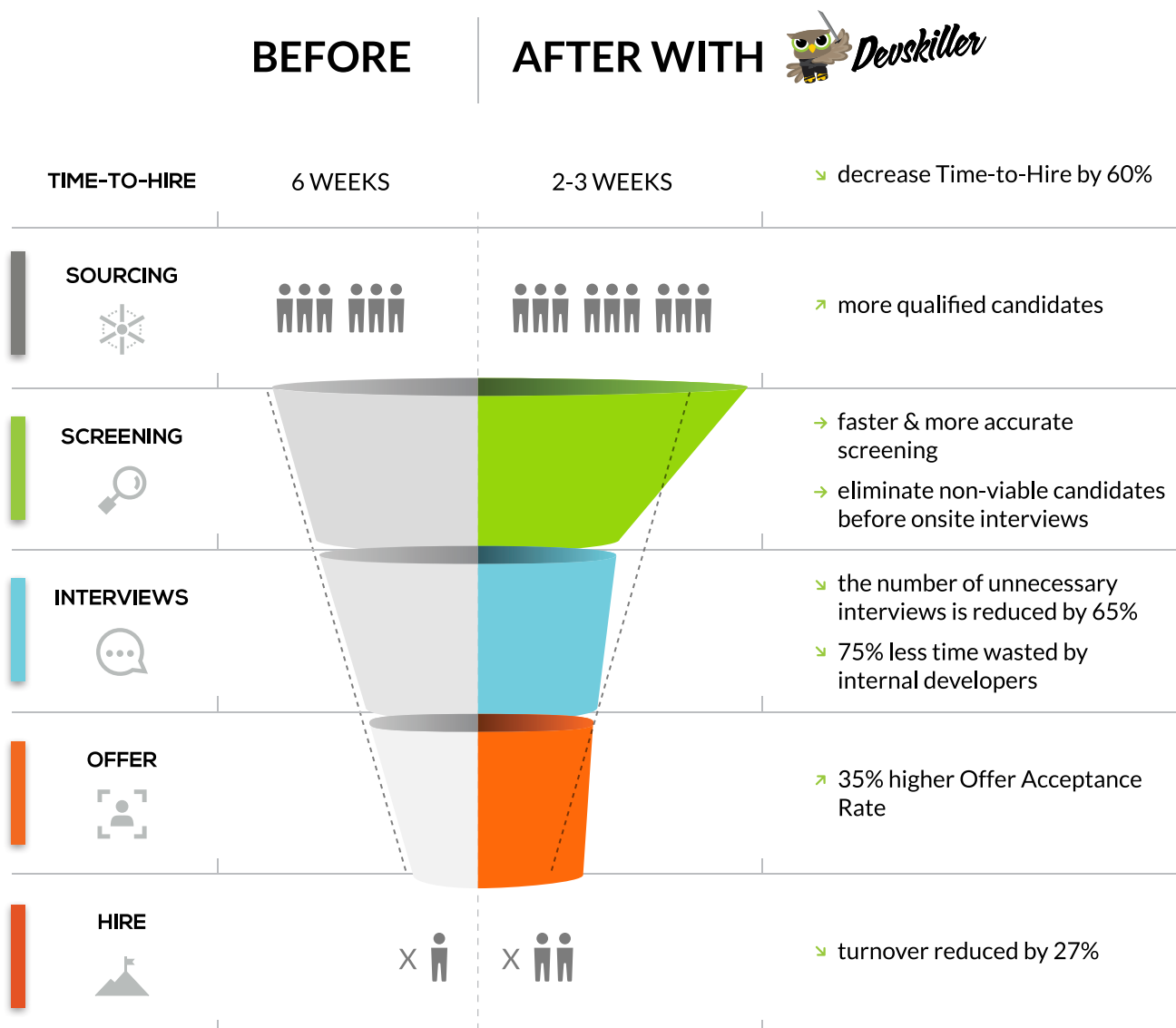
At Devskiller, we make assessing programmers' skills look like their 1st day at work, using real-life programming tasks and code review challenges. We let our clients build custom tasks from their own code base, as well as choose from a library of ready-to-use tasks.

## **What does Devskiller bring to the recruitment process?**

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With Devskiller, tech recruitment becomes so much more effective. Our customers report a shorter than ever Time-to-Hire (60% shorter) with an excellent Quality-of-Hire.

Here's how using Devskiller positively impacts your recruitment process from start to finish.



Visualization is based on interviews with Devskiller clients

**Devskiller** is a technical screening and online interview platform for hiring developers who get the job done. Our programming tests go beyond languages by additionally testing frameworks and libraries which enable you to find devs with the right skill sets. Developers appreciate being tested with Devskiller because it mirrors their 1st day at work.

Think of us as your on demand technical lead who is always ready to help you check the coding skills of your candidates. The great thing about Devskiller is that you don't need to be proficient in coding because you can choose from a library of ready-to-use tests prepared by our experts or create tasks using your own codebase.

## 1. SOURCING

### OUTCOME

a higher volume of candidates (especially passive ones)

Developers are inundated with job offers and the tech industry is definitely a candidate-centric market. As an employer, if you don't stand out, you die. The key to sourcing developers is to make it fun, challenging, and meaningful. Devskiller is designed this way. With Devskiller, you can create hackathons or certifications which will boost your employer branding and attract candidates who would never apply otherwise. What is more, all tests are based on real programming problems, not algorithmic puzzles which have nothing to do with the jobs of developers.

### OUTCOME

more time available to Tech Recruiters to source, so they can focus on what matters

As screening with Devskiller becomes more effective, Tech Recruiters spend less time on verifying the resumes of weak candidates and carrying out unnecessary interviews. All of the results are automatically scored so assessing candidates' skills requires very little time and effort on the side of the recruiter. Therefore, they get more time for sourcing which is a very engaging and time-consuming process.

## 2. SCREENING

### OUTCOME

all candidates screened based on real-life coding skills and not resumes

Resumes don't prove whether a candidate has or lacks certain programming skills which are necessary to do the job. A work sample coding assessment which allows the candidate to use their favourite resources allows you to identify top performers. This cannot be achieved by means of whiteboard coding interviews or algorithmic questions.



**OUTCOME**

eliminating non-viable candidates before an onsite interview

Devskiller allows you to assess the tech skills of your candidates online without having to invite them to an onsite interview. This takes the strain off both your HR and IT Departments.

**OUTCOME**

quick and accurate screening of problem-solving skills and not academic knowledge

With Devskiller, you can automatically verify the tech skills of every candidate who applies for a certain position with a work sample test which gives everyone a fair chance. You just need to invite candidates and wait for their results to appear in your dashboard after they complete the test.

### 3. INTERVIEWS

**OUTCOME**

the number of unnecessary interviews is reduced by 65%

Devskiller can be used to screen technical skills as well as carry out online coding interviews. Screening programming skills early in the recruitment process allows you to focus your time, energy, and conversation on the most promising candidates. An accurate preselection process generally means that few people need to be invited to an onsite interview to find the right candidate.

**OUTCOME**

a better understanding of the candidate's abilities thanks to online coding interviews

A live code pair interview gives you a window into your candidate's development process and lets you understand how they think. Because online coding sessions can be recorded and played back whenever you need them, they offer a great insight to both recruiters and developers.

In order to be meaningful, an online code pair interview should address a real business issue, be carried out under real-world conditions, and give the candidate an idea of the possible job to be done if hired.

**OUTCOME**

eliminating the traditional constraints of travel budgets and costs with online coding interviews

Online code pair interviews come with a number of benefits. Firstly, they allow you to interview your candidates without having to invite them to your office, cover their interview travel expenses, book accommodation, arrange an interview venue, and so forth. This isn't to say you shouldn't do all of these things, but simply be more selective and use online coding interviews whenever possible. Remember that developers are busy people who typically have projects lined up so they don't appreciate having their schedules disrupted.

This comes in handy especially in the IT industry where relocation is a frequent occurrence. With online coding interviews, you don't need to limit yourself to candidates who are in your area or are eager to travel to be interviewed. Being able to arrange an online coding interview makes it much easier for both parties involved in the process to set a date, which is typically one of the biggest roadblocks in the recruitment process.

**4. OFFER & 5. HIRE****OUTCOME**

a 35% higher Offer Acceptance Rate

The best developers usually look into more than one job opportunity and in many cases receive more than one job offer. If you don't want your competitors to hire the most promising candidates before you do, speeding up your recruitment process without sacrificing quality should be your top priority. A meaningful, well-thought-out hiring process gives developers an idea of the culture and values of your company, as well

as shows them you understand who they are and what they do. This small effort has a substantial impact on employer branding.

**OUTCOME**

turnover reduced by 27%

The candidates who pass Devskiller's assessment prove to be much more likely to perform a job well. That's because the work sample collected in the process gives you a better idea of what they can or cannot do if hired for the position. At the same time, giving them a glimpse of their future job prevents them from leaving soon after being hired. The stakes are high because of the incredibly high cost of turnover. Based on [PwC Saratoga](#) formula, this can reach 150% of one's "projected base salary for departing exempt employees and 0.5 times the projected base salary for nonexempt employees."

**To sum up, implementing Devskiller leads to:**

- **a 60% shorter Time-to-Hire**
- **65% fewer interviews so you can focus on viable candidates**
- **75% less time wasted by internal developers**
- **a 35% higher Offer Acceptance Rate**
- **a 27% lower turnover rate**

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## CHAPTER 4:

# How Allegro hacked the process of recruiting programmers with Devskiller [a case study]

Allegro is a leading e-commerce site and online auction service employing approximately 1,400 people, half of them software and hardware engineers. In 2008, the company was acquired by Naspers Ltd. In 2016, Allegro Group was acquired by private equity firms Cinven, Permira and Mid Europa for \$3.253bn. It also owns online brands and marketplaces such as:



### MAIN CHALLENGE:

An inefficient hiring process with no accurate technical screening methodology

### OVERALL GOAL:

Recruiting highly skilled programmers in a fast and effective way

## Allegro's tech recruitment process

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Allegro uses Devskiller to assess the coding skills of their candidates. Their technical screening is based on solving real programming problems and code review challenges which are an accurate and precise way of verifying their candidates' skills.

Allegro's recruiters can now spend more time on drawing valuable candidates into the recruitment process in a number of ways e.g.: via career websites, employee referral programs, social recruiting, conferences, and traditional job posting ads.

During the preselection stage, candidates are asked to take a Devskiller test tailored to the role. Based on their results, successful candidates are singled out and invited to up to three interviews (45 minutes each) with the IT department to further verify their programming competences and with the HR department in order to assess their soft skills and company fit.

Having streamlined their recruitment process, Allegro can now fill an open technical position in as little as one week. A short recruitment process leads to a higher Offer Acceptance Rate because Allegro can make the decision to extend the offer or not faster than their competitors.

### RESULTS:

**By using Devskiller in the recruitment process, Allegro:**

- decreased their Time-to-Hire by over 50% (from 1 month to 1-2 weeks)
- cut the time their internal programmers spent on tech recruitment by 30-40% without hindering the recruitment process
- increased the number of candidates who get hired after being invited to an onsite interview which means that the preselection process is more accurate

## Allegro's recruitment process with Devskiller







## Customer testimonials

*Devskiller is a great tool for supporting recruiting tech talent.*



It covers various programming languages, frameworks, and libraries which makes it suitable for any recruitment campaign. It gives a lot of flexibility and fits the recruitment process allowing the company to create its own programming tasks and code review challenges, also with the company's own code base. This makes it easier to find a programmer that matches our specific job requirements. Moreover, Devskiller automatically assesses and scores candidates delivering your final results in a clear and easy-to-screen report that you can use to compare all candidates between each other.

**Jakub Kaczmarek**, Development Manager at Allegro

*Devskiller is very helpful at the screening phase.*



The candidate can take an assessment test at the most convenient time for them. Screening candidates couldn't be easier. Devskiller allows us to compare candidates based on their overall score or dig deeper into their exams. We get an accurate picture of the candidate's programming skills. It successfully rejects candidates with weak skills and lets us pick up the ones with potential.

**HR Department** at Allegro



# Developer screening & online interviews in one platform powered by RealLifeTesting™

## WHY DEVSKILLER?

Thanks to our RealLifeTesting™ methodology, our programming tests mirror the first day of work experience to identify top performers. We go beyond testing languages by testing frameworks, libraries, databases, and tools with the main focus on the end solution.

### SOURCING

#### Get more great developers

Learn the best sourcing techniques.  
Attract devs with online programming challenges.

#### Powered by:

- IT Recruitment Book
- HR Certification course
- Hackathon support
- Branded IT Badges

### TECHNICAL SCREENING

#### Single out the right talent

Assess technical skills with our AI powered tool using RealLifeTesting™ methodology.

#### Powered by:

- MobileSkiller
- RootSkiller
- LiveSkiller
- DBSkiller

### GROWTH & RETENTION

#### Map skills & evolve

Grow your company by revealing your developers' skill sets and unlocking customized flexible career paths.

#### Powered by:

- MapSkiller

## RESULTS

60% ↓

decrease in  
Time-to-Hire

65% 👤

fewer interviews

75% ⌚

less time wasted by  
internal developers

35% ✓

higher Offer  
Acceptance Rate

## CUSTOMERS



Contact us at [hello@devskiller.com](mailto:hello@devskiller.com)



# Features

Hack the process of recruiting programmers

## Devskiller

Test coding skills in frontend, backend, infrastructure, and mobile technologies in one place. We provide a library of ready to use tests and tasks. Everything is 100% customizable.

## RootSkiller

Test Administrators, DevOps, and Security engineers with tasks providing root access to cloud-based virtual machines.

## LiveSkiller

Have remote CodePair and video interviews with candidates in different locations.

## DBSkiller

Test SQL and noSQL skills with programming challenges on specific database engines.

## MobileSkiller

Test iOS and Android skills on real programming tasks using technologies like Swift, Objective-C, Java, and Kotlin to identify the best mobile developers.

## MapSkiller

Map your developers' skills visually. Reveal your developers' skill sets and unlock multiple paths for their careers to take.

## Programming tasks

Base your hiring decisions on solving real coding challenges in a real project environment. We don't rely on algorithmic puzzles.

## Database tasks

Test SQL and NoSQL skills with programming challenges on specific database engines.

## Code gaps

Test practical programming skills by letting the candidate fill in the blanks with correct code snippets.

## Multiple question types

We support both multiple choice questions with one or more answers, as well as open questions.

## Code review challenges

Verify familiarity with design patterns and coding practices. Assess code quality, efficiency of debugging, and trap discovery.

## DevOps, Security, and QA tasks

We provide dedicated DevOps and Security tasks which give root access to a virtual machine and QA that emulate a real service with bugs to find.

## Positive Candidate Experience

Our coding tests resemble real-life work experience and verify coding skills, not academic knowledge. Candidates like this kind of approach as they can show their skills in action.

## Integrated Development Environment

The candidate works in a natural programming environment by either cloning the project GIT repository to their favorite IDE or using our browser IDE.

## Full programming project support

Our programming tasks use whole projects with frameworks, libraries, and external resources to imitate real life coding problems.

## Create custom tasks & tests

We let you use your code base to create custom coding tasks to mirror the challenges the candidate will face once they get the job.

## Multiple programming language support

Our code evaluation engine supports major programming languages including JavaScript, Java, PHP, Python, Ruby, C#, C++, Go, Kotlin, Android, iOS, Scala, and SQL.

## Multiple framework and library support

We verify your candidates' knowledge of programming languages, frameworks, and libraries to fully match the skills you are looking for.

## AI Benchmarking Engine

We use machine learning algorithms to give you feedback with over 85% accuracy to determine if your candidate is viable.

## Co-branding

Strengthen your employer brand by adding a company logo to be visible to the candidate in the test.

## Candidate Report

Compare your candidates' overall scores and dig deeper into their results with user and printer-friendly reports. Anonymize the results to reduce unconscious bias.

## Job description-based Skills Wizard

Our Skills Wizard helps you generate coding tests based on job descriptions in order to verify the exact skills you are looking for.

## Account Manager

Our experienced Account Managers help top IT companies from all around the world get the most out of using Devskiller.

## Hackathon support

We provide the infrastructure and support to hold programming contests as an efficient way to attract and engage developers.

## Automated scoring

We automatically score questions and programming tasks, as well as evaluate candidate code for logical correctness, time efficiency, and quality.

## Session recording

Record your candidates' sessions so you can share and analyze them long after they are over.

## Psychometric testing

We're partnered with Cubiks™, the world leading psychometric testing platform, to provide the best solution to truly explore your candidate's personality.

## API

We provide you with API access so you can use Devskiller in the way that gives you the best results.

## Teams and divisions

Your account can be divided into teams or divisions and users can be granted custom access.

## ATS integration

We're constantly integrating with various ATS platforms to make your IT recruitment process as smooth as possible.

## Security features

Keep your technical screening secure and accurate with plagiarism detection, geolocation IP tracking, and photo capture.

## SAML-based Single sign-on (SSO)

Our system integrates with most popular providers of SAML Single Sign-On like Azure AD or G Suite.

## Social listening tools

We are constantly monitoring the Web for mentions of our content to take immediate legal action. This protects our content from being leaked.

Products developed

Types of tasks

Why programmers love it

Why recruiters love it

Technical components



**Developer screening & online interviews  
in one platform powered by  
RealLifeTesting™**

Start a free trial at Devskiller and find out  
how easy it is to assess coding skills

**Start free trial**



**devskiller.com**

Contact us at **hello@devskiller.com**  
or call **+44 20 3876 6444**