NEXT TECHNOLOGY
PROFESSIONALS
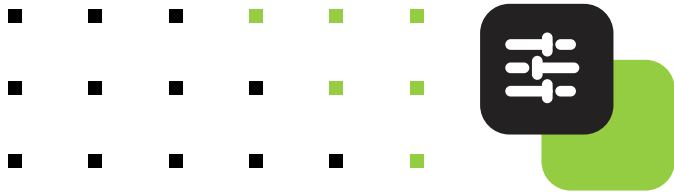
How to hire a .NET Developer?

6 effective tips

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What is .NET?

.NET is a modern, open and constantly developed programming platform, behind through which cross-platform applications are created for such systems as Windows, Linux, MacOS or Android. .NET includes a huge number of extension libraries (shared and useful code package) called NuGets to help developers create applications faster and more efficiently. The framework provides the runtime and class libraries that give a collection of tools and functions for future programs. A .NET Developer must be familiar with at least one development environment to be able to effectively create software. One of the most popular backgrounds for software development is Visual Studio, which supports not only the .NET platform, but many others as well.
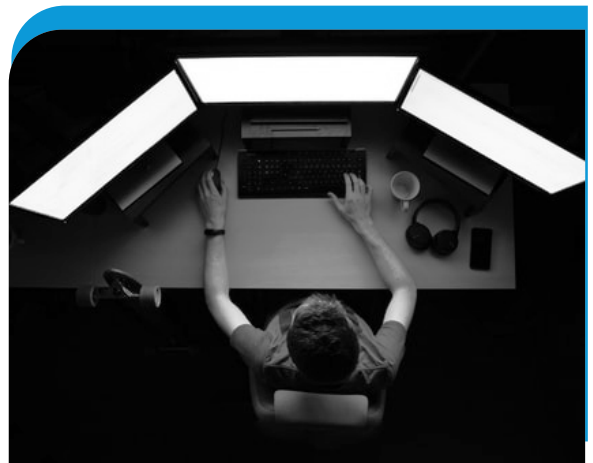
The first release of the .NET platform was on February 14, 2002 and has been one of the most popular development environments over the years. According to data provided by Microsoft, **over 5 million** developers use this solution around the world.
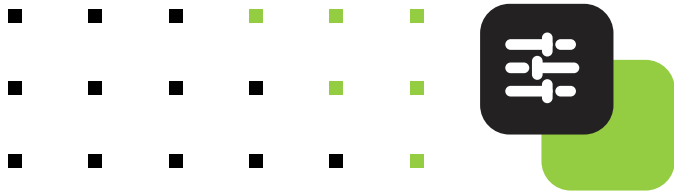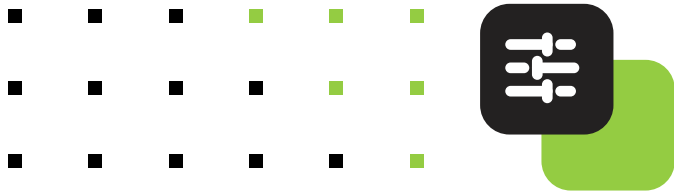
What is .NET?

Over these two decades, the .NET platform has grown enormously. Throughout the time, access to it was obtained not only by Windows users, but also Linux and macOS. In 2014 the company made the project available in the open source formula on the GitHub platform. That is, since then the **software, as well as the original source code, is available free of charge - it can be distributed and modified without cost.**

Current version
.NET 6.0
🗓 from November 8, 2021

New version
.NET 7.0
🗓 from November 2022

Despite its age, the .NET platform is still evolving. Its current version is .NET 6.0 which was released in November 2021. The Microsoft team also announced that it plans to release further development versions each year in November.

What is .NET?

.NET is tightly integrated with the C# programming language that was designed by Anders Hejlsberg from Microsoft. C#, in turn, is an extension of the C/C++ language. It is a popular, high-level, object-oriented programming language, integrated into the .NET platform, which is its runtime environment and foundation, on which the applications are made of.

High-level programming languages have a complex structure and, at the same time, are based on code that is easier to remember (it often refers to English abbreviations). The expressions used identify with the specific operation of the code. They are based on abstract action - the programming language does not operate directly on commands to the processor. The information sent to it is compiled beforehand. Additionally, they relate to many operations.

Source: PLOUG

Sebastian Krupa
Senior .NET Consultant

".NET is a mature and open solution enabling the creation of modern, responsive and tailor-made projects for demanding customers from every business sector. From an uncomplicated addition in the Excel sheet to an advanced machine park management systems in a modern 4.0 production hall - knowing the capabilities of this platform what limits us, is only your imagination."
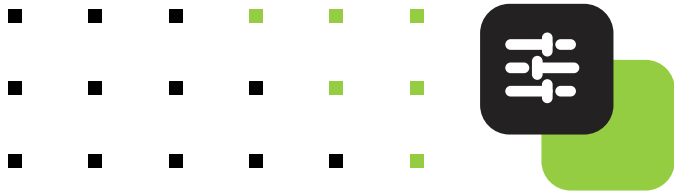
What is .NET?

There are several types of the .NET platform. They differ not only in name, but above all functionalities and designation for various platforms and operating systems:

.NET Framework is the original version of the .NET platform that mainly runs on computers with Windows.

.NET (previously called .NET Core) is a new, cross-platform, faster and more a flexible version of the .NET Framework, which not only runs on operating systems such as Windows, Linux and macOS, but also allows application development designed for cloud computing and the Internet of Things, and even solutions assisted by machine learning.

Mateusz Rus
.NET Developer

"It is worth mentioning .NET Standard here. This is Microsoft's solution to the problem of unifying the .NET API so that it works on all .NET-based platforms. It helps to standardize the way of communication between different .NET platforms."

ASP.NET, in turn, is a mature framework, intended for creating websites and web applications using HTML, CSS and JavaScript. It provides the services needed to develop web applications based on an enterprise-class server on Windows.
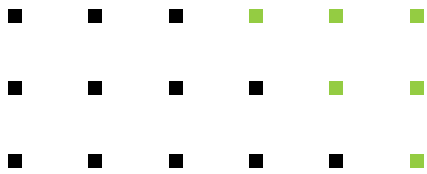
What is .NET?

ASP.NET

ASP.NET Core is a new version of the ASP.NET framework, written for .NET Core. Similar to .NET Core, ASP.NET Core is also open-source and can be hosted on Windows, Linux, and macOS.

Cezary Walenciuk

Senior .NET Developer, Blogger, YouTuber

"There are many styles of application development in ASP.NET Core. The style according to the MVC pattern is the most common one. The minimal style is becoming more and more popular. A page, too, can be created using pages themselves and the Razor language, which is a mutation of C# for HTML pages. In the old ASP.NET, there is a solution that we call Web Forms. It was popular because of the ability to use pre-made controls that already created the appropriate elements on the page - unfortunately, this also created clutter."
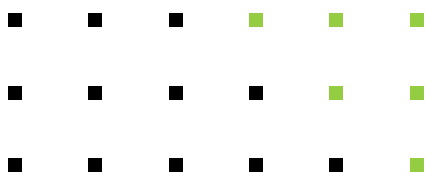
Skills of .NET Developers

.NET Developer is a person dealing primarily with the analysis, creation and development of applications using the tech stack of Microsoft. Except for programming on the above-described platform, .NET Developers, can do other tasks, e.g. writing scripts to automate PowerShell, authoring automatic Microsoft Flow, building applications using PowerApps, modeling SQL and NoSQL databases, and even software development using other languages such as JavaScript, Python, C ++ or Scala.
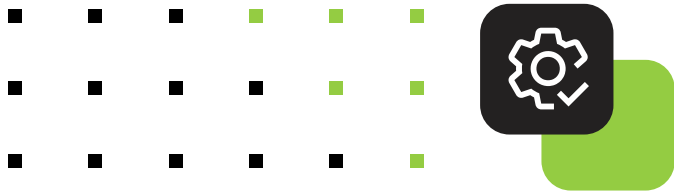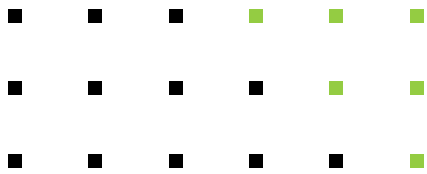
Skills of .NET Developers

People who want to become .NET Developers have several paths to choose from:

✓ Desktop (applications written for a specific system installed locally on the computer). This includes:

- ■ WinForms - classic, simple Windows applications,
- ■ WPF (Windows Presentation Foundation) - XAML language combined with C# through the pattern design MVVM.

✓ WEB (applications launched in the browser window via the URL/WWW address). The application is available on the server:

- ■ Web Forms,
- ■ MVC,
- ■ MVC / WebAPI.

It is also worth mentioning Blazor. This is a feature of ASP.NET, the popular web development platform, that extends the .NET development platform with tools and libraries for building web applications.

✓ Mobile/Desktop:

- ■ UWP (Universal Windows Platform). This platform enables developers to create applications that share virtually all code for a vast spectrum of devices.
- ■ Xamarin - a platform for creating modern and efficient iOS, Android and Windows applications for using the .NET platform.
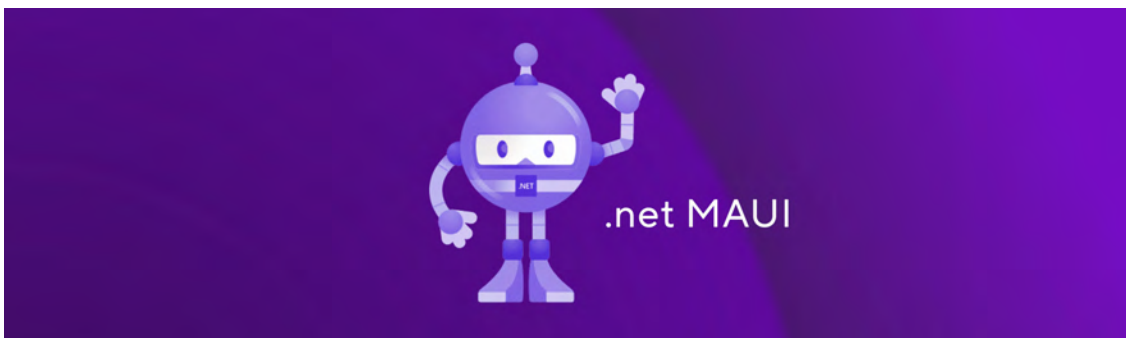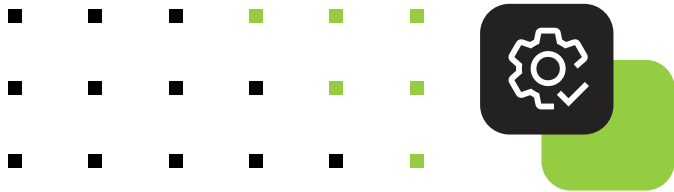
Skills of .NET Developers

■ .NET MAUI - one of the newest solutions on the market, multi-platform interface based on .NET platform. It is used to create native mobile and classic applications using languages C# and XAML. Thanks to it, it is possible to create programs that run on different operating systems with a single codebase.

Sample project

With .NET MAUI we can create a universal desktop application for personal computers and mobile devices that will monitor and partially automate the inventory in the warehouse and shipments in the enterprise, and generate KPIs for the senior level management. The engine of the application will be a website based strictly on .NET 6, which will work independently in the Microsoft Azure cloud and will communicate with the relational base SQL data, also administered within the cloud. Desktop applications will constitute a kind of presentation layer of the entire system, the calculations of which are performed and are processed only in the cloud, and the separated logic allows for the creation of a series extensions and modifications as needed, so that the system can evolve simultaneously with the company for which it works.

Skills of .NET Developers

When analyzing job advertisements for .NET Developers, it can be noticed that employers most often expect the following skills:

- ✓ experience in working with the .NET platform and C# language,

- ✓ knowledge of SQL databases - preferably MS SQL,

- ✓ experience in working with frontend technologies - HTML, CSS, JavaScript,

- ✓ knowledge of at least one of the following frameworks: React/ Angular 2+/Vue.js.

.NET Developers can perform tasks only on the backend or partially also on the frontend (as Fullstack Developers). Increasingly, employers are looking for programmers who will support them and suggest solutions both in terms of business logic and application presentation layer.

Sebastian Krupa
Senior .NET Consultant

"Today's standards and progressive development in the industry mean that a good programmer is not only a colloquial 'code writer', but an individual characterized by creative problem solving, who not only is able to pass knowledge to team members, but also be a person open to constructive criticism, keeping pace with constantly changing trends and frameworks. The developer also often has to be ready to be able to put forward and justify solutions and functionalities in front of business, product owner or even project sponsors. A good programmer needs to understand not only the application, but most of all the people who will be using it and the business process itself."
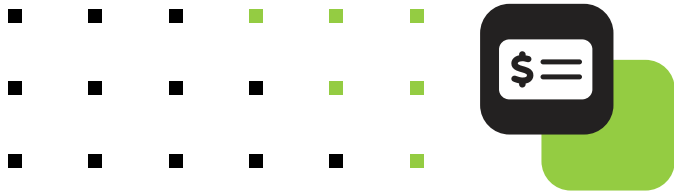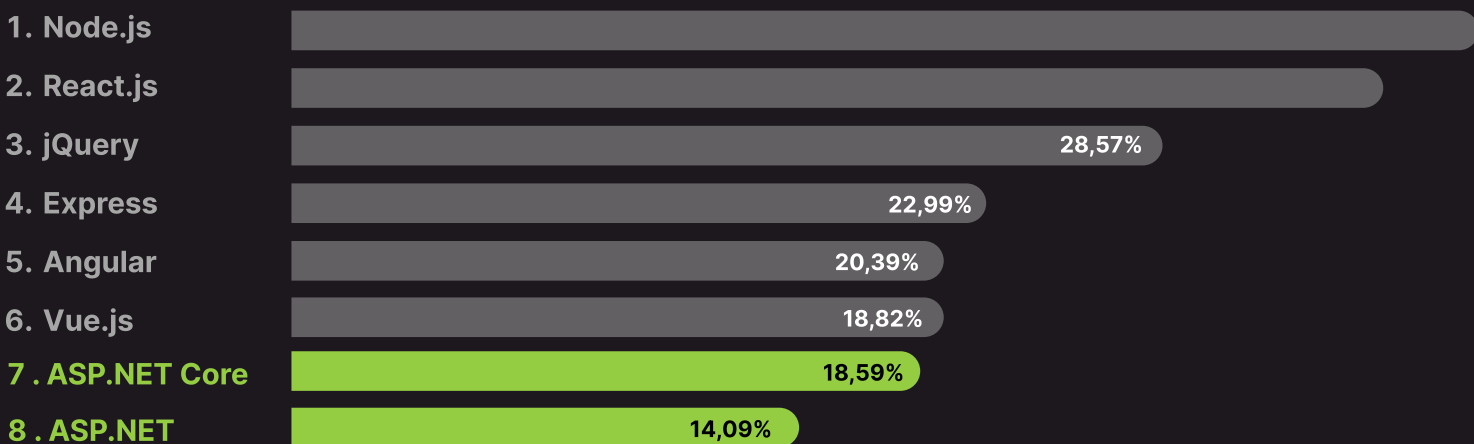
Salaries of .NET Developers in Poland

.NET is constantly at the forefront of the most popular technologies when it comes to recruitment needs of companies. In the "Report on the salaries of Polish programmers for 2021", created by Just Join IT, this technology took 5th place (8,16% of all published job ads).

Rank	Technology	Percentage
1.	JavaScript	13,77%
2.	Java	13,40%
3.	Testing	9,04%
4.	PHP	9,03%
5.	.NET	8,16%

In the 2022 report from Stack Overflow, ASP.NET Core took 7th place in the ranking of the most used web frameworks. In the same report, ASP.NET was ranked 8th.

Rank	Technology	Percentage
1.	Node.js	
2.	React.js	
3.	jQuery	28,57%
4.	Express	22,99%
5.	Angular	20,39%
6.	Vue.js	18,82%
7.	ASP.NET Core	18,59%
8.	ASP.NET	14,09%
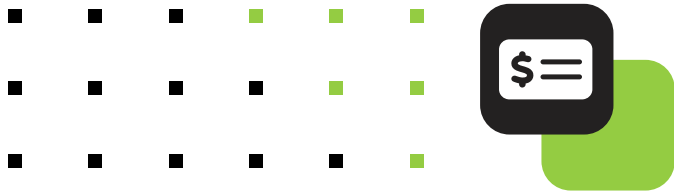
Salaries of .NET Developers in Poland

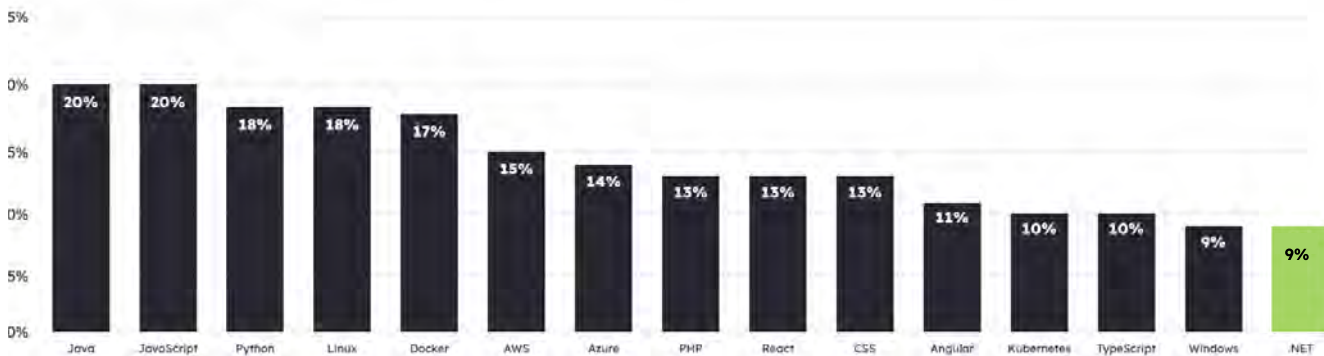According to our report "Prepare for the IT recruitment process in 2022", 9% of IT job vacancies published last year were aimed at .NET Developers.

Number of offers divided by technology

Source: Own elaboration based on data from itradar.io for 2021

Technology	Percentage
Java	20%
JavaScript	20%
Python	18%
Linux	18%
Docker	17%
AWS	15%
Azure	14%
PHP	13%
React	13%
CSS	13%
Angular	11%
Kubernetes	10%
TypeScript	10%
Windows	9%
.NET	9%

Kamil Ficek
Senior IT Recruitment Consultant

".NET Developers prefer a new stack with no archaic technologies (WinForms, Visual Basic, Windows Presentation Foundation, Windows Communication Foundation), only Core or DevOps tools (CI/CD / Docker / Kubernetes). What's more, many specialists often care about backend development towards microservices and Cloud (usually Azure)."

In turn, the earnings of .NET Developers at all levels of experience are as follows:
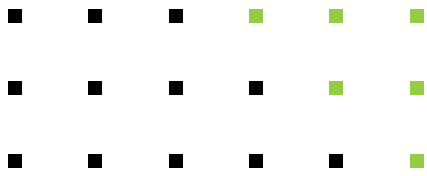
Salaries of .NET Developers in Poland

Technology and the average expected salary

Source: Own elaboration based on data from an online survey conducted between September and December 2021

Technology	Seniority level	Type of contract	Average value of the expected salary*
.NET	Junior	B2B	9,673 zł
		CoE	8,359 zł
	Mid	B2B	18,120 zł
		CoE	16,864 zł
	Senior	B2B	28,231 zł
		CoE	25,554 zł
	Expert	B2B	33,424 zł
		CoE	31,013 zł

*Data from the 2021 labor market report, including an average salary increase of **20%**
*B2B: net on the invoice, excluding VAT
*CoE: gross

According to the data collected for <u>our report</u>, IT specialists expect a rise by an average of 20% when changing jobs. When preparing the above table, based on data from 2021, we took this trend into account. When comparing salaries, however, it should be kept in mind that, as in any other industry, the ranges may differ significantly depending on the length of service, education and the specificity of the company. Junior is defined in this case as a person with up to 2 years of experience, Mid from 2-4 years, Senior 4-10 years, and Expert with more than 10 years of experience.
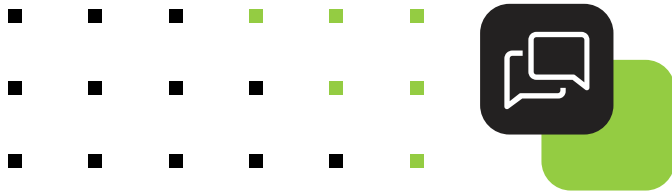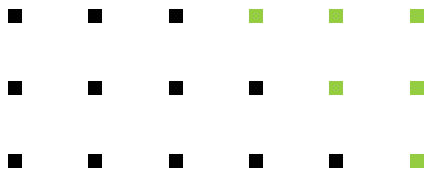
Recruitment tips

Where to find candidates?

- ☑ Job boards
- ☑ LinkedIn
- ☑ Groups on Facebooku
- ☑ GitHub
- ☑ Stack Overflow

- ☑ Career page
- ☑ Internet forums
- ☑ Other social media
- ☑ Employee referrals
- ☑ Conferences/webinars

4.1. Create an attractive job offer

In order to attract suitable candidates, it is primarily advisable to write a precise job advertisement. The most important points that should be included in the advertisement are:

☑ Salary ranges

It is worth constantly monitoring the level of salaries on the labor market, following payroll reports, knowing the amounts offered by the competition and talking to people from the industry who are actively recruiting for positions related to .NET technology.

Recruitment tips

Our data shows that when changing jobs, IT specialists employed on CoE or B2B expect an average salary increase of **20%**.

Download the report

✅ **Work mode**

Include information whether the work is carried out in remote, hybrid or stationary mode. In the case of hybrid work, specify the exact number of days the employee should be in the office.

✅ **Preferred contract type**

Nowadays, many IT specialists run their own business, which is why some of them expect a B2B contract. By offering only an employment contract, you can discourage many applicants from applying.

64% of Juniors and 63% of Mids are employed on a **contract of employment**. In turn, 55% of Seniors and 54% of Experts, whose earnings are higher, most often cooperate on the basis of a **B2B contract**.

Source: Next Technology Professionals' Report

✅ **Tech stack**

List all technologies (along with their versions) that are required and used in a given position and project. This will allow you to reach the appropriate IT specialists and give them an initial insight into the job.
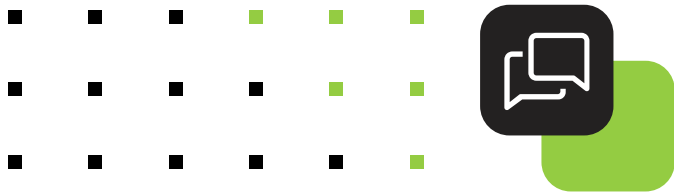
Recruitment tips

✅ **Information about the company**

Describe exactly what the company does, what the project and the team to which the candidate is applying looks like. Also include information on how many people are already in the team and what level of experience they have - thanks to this, the candidate will be able to assess what impact his role will have on the development of the organization and how much he can learn from the co-workers.

✅ **The course of the recruitment process**

Inform the candidate about the recruitment process and how many stages it consists of. Include information about planned interviews or technical tasks and the duration of each stage. It is important for the candidate to know how much space in the calendar he will have to find.

✅ **Offered benefits**

Benefits can encourage undecided candidates and are often the so-called "last step" when comparing similar offers. The possibility of remote work and flexible working hours are becoming the norm. Recently, the benefit of the 4-day work week has been gaining popularity, but our observations show that the market rate, good atmosphere in the team, providing opportunities for development and work on interesting projects are the key elements of an attractive offer.

Cezary Walenciuk

Senior .NET Developer, Blogger, YouTuber

"As a programmer, I went through many recruitment processes. I have had many times the dilemma of who to choose. The answer seems simple 'the one who gives more' - here I would point out that at different stages of career and life, people want different things. It could be the chance to gain new experience; to work with someone who is fascinated by the same technology, or flexible working hours to take care of a newborn or do a driver's license. If we have a key candidate we want to hire, perhaps a brief conversation with a prospective boss or colleague, or even a client will do more than raising the salary."
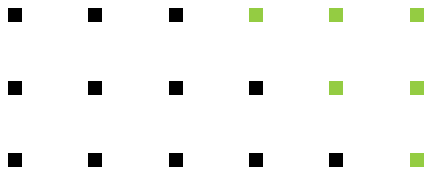
4.2. Search in the right places

Platforms such as UpWork, Toptal, Freelancer, or job board advertisements can be helpful in finding .NET Developers.

The most popular job boards in Poland are:

- JustJoin.it – the most popular platform in Poland for acquiring specialists from the IT industry. The number of advertisements displayed on the portal increased to over 33 million annually, and employers published over 30,000 job offers during that time.

- NoFluffJobs – website for people looking for a job in the IT industry. It has friendly navigation and precise division into specific positions.

- Bulldogjob – a space where the employer has access to a community of over 160,000 programmers, testers and other IT specialists from around the world every month.

- Pracuj.pl – the largest job search engine in Poland. You can publish there advertisements from any industry and experience level, as well as career advice.

In Poland, .NET Developers are sought after by both smaller companies and the more famous ones, incl. Google, Oracle, PwC, IBM, Asseco, Capgemini, and even banks such as Millenium and mBank.

Google　　　ORACLE　　　pwc

asseco　　　Capgemini　　　IBM
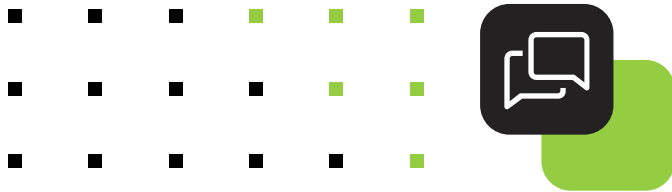
Recruitment tips

The <u>Jobvite report</u> shows that social media that is worth using in the context of finding high-quality candidates include:

LinkedIn (53%)

**Youtube** (22%)

Instagram (20%)

Facebook (33%)

Twitter (21%)

It's also a good option to be active (posting job ads, giving recruitment advice, interacting with software developers) on Facebook groups:

- <u>IT Jobs in Poland</u>

- <u>Praca zdalna IT</u> (Remote work IT)

- <u>Praca/ staż w IT</u> (Work/ internship in IT)

- <u>Praca szuka specjalistów z branży IT</u> (Work is looking for IT specialists)

- <u>Programiści Polska / Developers Poland</u>

- <u>Praca: .NET, #C Polska</u> (Work: .NET, C# Poland)

- <u>.NET Developers Poland Job Market</u>

- <u>C# ASP.NET, MVC, Web API Developer</u>

- <u>Praca Backend (Java, Python, C++, .NET, PHP, Ruby on Rails, Scala)</u> (Backend Work (Java, Python, C++, .NET, PHP, Ruby on Rails, Scala))

- <u>Programowanie/Biznes i Praca w IT/Java/PHP/.NET/Python/ C#/Polska</u> (Programming/Business and Work in IT/Java/PHP/.NET/ PYTHON/C#/Poland)

- <u>PROGRAMMERS/ DEVELOPERS/ JAVA / PHP / C# /. NET / PYTHON /JAVASCRIPT POLAND</u>
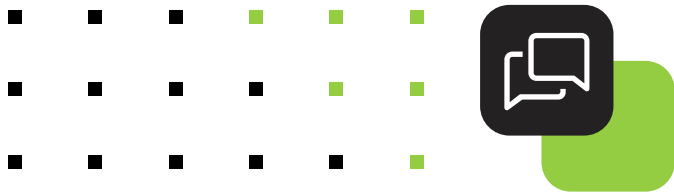
Recruitment tips

Some programmers share their knowledge by running thematic channels on programming languages or by sharing educational posts and triggering discussions. Some of them blog or post projects on GitHub, Stack Overflow or online forums.

**The following .NET profiles are worth following:**

- dotNET
- Nick Chapsas
- Mateusz Rus
- Adam Kamizelich
- Cezary Walenciuk
- Microsoft .NET Blog
- Blog Programisty .NET
- Plukasiewicz.net
- 4programmers.net
- .NET Foundation

Another source can be lists of experts speaking at conferences or webinars. Appearing at such events may bring us closer to contacting the best of the best and hire them in the next step.

The more interesting events related to .NET that will take place in 2022 include:

- Dotnetos Conference - 10-12.10.2022
- .NET DeveloperDays - 17-20.10.2022
- 4Developers Wrocław - 08.11.2022
- Update Conference Prague - 10-11.11.2022
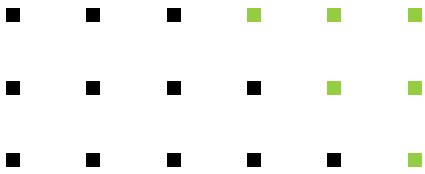
Recruitment tips

Employee referrals are also a great idea to find good programmers. You can ask anyone for a recommendation - your employees, business partners, friends from the network, or other companies with whom you cooperate. There is a high probability that your friend, a .NET Developer, knows other people working in the same position - perhaps one of them is open to new professional challenges? The biggest advantage of this method is getting in direct contact with good programmers. People from recommendations are usually verified, which minimizes the risk associated with the potential choice of a less experienced partner who will not provide what you are looking for. In addition, the candidate from the recommendation at the start places more trust in the company, after all, why should his good colleague encourage him to contact an average potential employer?

Sample boolean:

(".net" OR ".netcore" OR ".net core" OR "dotnet" OR "dotnett" OR "dot net" OR "asp.net" OR "aspnet" OR "asp.net" OR "asp .net" OR "csharp" OR "c#" OR "c-sharp" OR "c sharp")
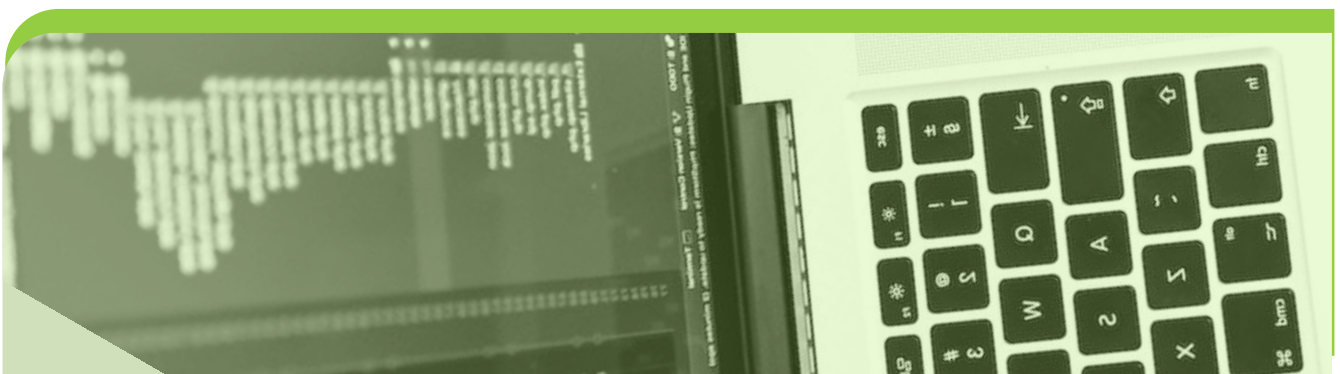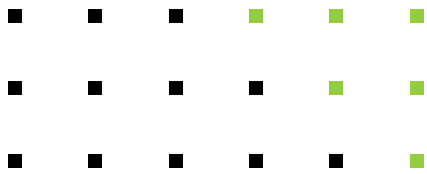
4.3. Conduct recruitment processes efficiently

According to our data, the preferred number of stages, which an optimal recruitment process should consist of, is a maximum of 2, and the entire process should last maximum 2 weeks. By extending this time, you may lose the opportunity to hire the best candidates.

Remember: the competition is not asleep.

**The most desirable course of the recruitment process:**

✓ The recruitment process has a maximum of **2 stages.**

✓ Competencies are verified during a **technical interview.**

✓ The contract is signed a maximum of **2 weeks** from the moment the employer receives the candidate's CV.

Milena Lewandowska

IT Recruiter

"A quick and specific recruitment process definitely increases the chance that a candidate will accept your offer. The recruitment task should relate to the real duties that await the employee at the workplace, so that he has a chance to feel what this job will be all about. Candidates also pay attention to regular contact and communication at what stage their application is. Even the information that nothing has changed since our last conversation is valuable."
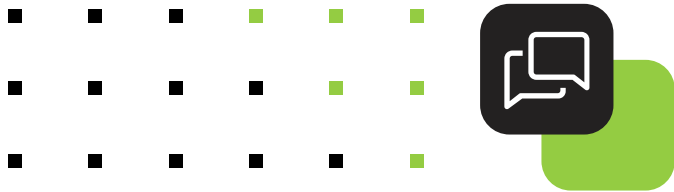
The preffered method of verifying competencies

Source: Own elaboration based on data from an online survey
conducted between September and December 2021

- Technical interview
- Remote task (homework)
- HR / business interview
- The verification will be a trial period at the company
- Live coding
- Code sample
- Pair programming
- Personality tests
- I don't want my skills to be verified.
  CV or profile should be enough.

29% 17% 15% 14% 7% 6% 6% 4% 2%

How many working days does it take to successfully close the recruitment process?

- ✓ Process with 1 stage: **10 days**
- ✓ Process with 2 stages: **12 days**
- ✓ Process with 3 stages: **27 days**

Source: Next Technology Professionals recruitment analytics
(internal document)
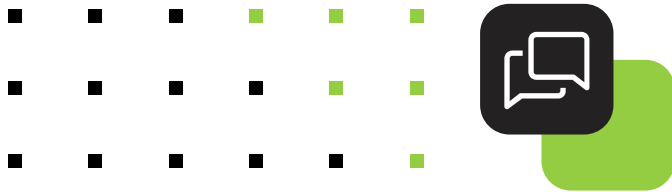
Recruitment tips

4.4. Ask the right questions during the job interview

Technical conversations require preparation. If you want to hire appropriate IT specialists, you should have detailed information about the technology and the ability to verify the level of their skills. Therefore, it is important to ask the right questions.

List of sample questions:

- What is ORM? Describe and provide examples.

- What is LINQ?

- Describe what SOLID, KISS, DRY and YAGNI are.

- What is the difference between IEnumerable and IQueryable?

- Which instruction is faster in theory and why? FirstOrDefault or SingleOrDefault?

- Describe what Delegate and Event are.

- Describe the difference between thread and process.

- Describe the difference between async and multithreading.

- SOAP or REST? List the advantages and disadvantages of both solutions.

- What's the difference between an interface and an abstract class?

- What are design patterns used for? Provide and describe examples of design patterns.

- What is Garbage Collector? How does the USING statement work?

- When is it worth using monolithic architecture and when is it worth using microservices?
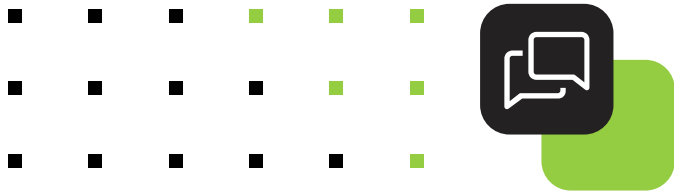
Recruitment tips

**?**   What is boxing and unboxing?

?   What functionality that you created in your previous job are you the most

proud of? Have you encountered any problems? What were the problems

and how did you solve them?

Recruitment questions in the .NET area may also refer to giving ways to perform a specific task. Often the task concerns a project to which an IT specialist applies. Sometimes this type of verification involves writing code that will condition certain actions, analyzing someone else's code, or finding a bug.

4.5. Consider getting support from the IT recruitment agency

If you have used different routes to reach candidates and you still haven't found the right person, it is worth considering engaging in the search a recruitment company. The main advantage of working with an experienced recruitment agency is saving time. Recruiters employed in the agency have experience and extensive knowledge of the IT market, follow trends and are in constant contact with specialists. In addition to knowing how to reach the most suitable candidates, agencies have their own databases, often numbering tens of thousands of people from the industry. When relations with candidates are maintained, reaching out to them with a new job offer can often turn out to be a success. Additionally, reliable recruitment agencies use a replacement guarantee - this important element should be included in the contract.
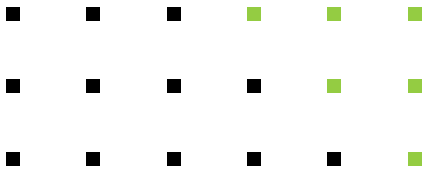
Recruitment tips

To make sure that the recruitment agency is trustworthy, you can familiarize yourself with the metrics they use to guide their processes. It is not only a source of interesting data, but also evidence of professionalism and effectiveness of the actions taken.

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A few examples of indicators that we monitor in our analytics:

✓ Number of candidates contacted for the position.

✓ The number of CVs sent vs the number of candidates invited to the first interview (with this indicator we measure whether our search is going in the right direction and whether the candidates are well matched).

The time from the start of the process until the candidate is hired.

The time our candidate works for the client.

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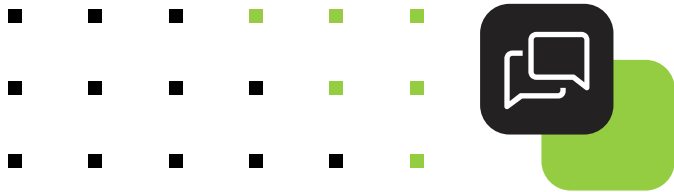
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4.6. Take care of the employees

Remember that successful recruitment does not end on the first day. In order to hire the right candidate, you had to go through many stages, which were probably quite a challenge for you. A new person in the company may seem happy and enthusiastic about their new job, but that is only half the battle.

Do you know when most candidates resign from their jobs?

After 3 months.
After 12 months.

Why?

3 months is very often a trial period for both parties. If the information from the recruitment interviews was not reflected in reality or the onboarding was not carried out properly, the contract is not extended. On the other hand, after 12 months, it happens that the candidate may begin to need new incentives for development, and the company cannot provide them. When an employee does not see the value of his work, does not feel appreciated, does not have a clear career path, he is looking for a new employer.

What can you do?

✅ Prepare a good onboarding process. It is very profitable in both the short and long term. You can use professional tools like Trello, ClickUp, or Jira for this, but it can also be a regular Excel spreadsheet.

✅ Maintain a good relationship with developers - regular (e.g. monthly) contact may mean a formal meeting where important topics are discussed, or it may also be something less formal, such as a walk around the office or a shared lunch.

✅ "Monitor the market and improve the current state" - constantly check what foreign companies and local competitors offer.

Remember that the more time you invest in your current team, the less time you'll have to invest in finding a new team.

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Hire .NET Developers

✅ **3-7 days**
We send the first candidates 3-7 days after the start of the cooperation.

✅ **2-5 candidates**
We present on average 2-5 candidates per position.

✅ **95%**
That many candidates work with our clients for at least 12 months.

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September 2022