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How to Become a Game Devel

In this article, you'll discover everything there is

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The bottom line

- Worldwide, only 15.43% of active game developer job advertisements list a degree as a requirement, according to our research.
- To start a career as a game developer, you need to familiarize yourself with programming languages, game engines, and principles of game design.
- A job at an indie studio is the best starting point for a game developer without a degree.

Video games have gone far past being a niche form of entertainment. These days, gaming can easily be considered an element of modern culture. In fact, statistics show that the video game industry revenue is [bigger than that of the music industry and film industry combined](#). And, the growth of market size shows no signs of slowing down. On the opposite, it is projected to have an annual value of [\\$268.81 billion by 2025](#).

But how much of these massive revenues reach the game developers?

Quite a significant amount, as it turns out. In the United States, the national median hourly pay for game developers is [\\$32](#), while the average yearly pay is [\\$83,375](#). This puts the pay of game developers right next to those of software engineers and data scientists: some of the most valued and well-paid professionals in the technology industry.

Naturally, with such high demand for game developers, it would make perfect sense to want to become one. But, can you really become a game developer without a degree?

The answer is a resounding yes. While degrees in programming, computer science, and software engineering can give you an advantage in the video game design job market, they are not at all strictly required to become a game developer.

There are many paths you can take to break into this industry and employers in this field are generally more interested in your skills and experience than your educational background.

In this article, you'll learn:

Share [What does a game developer do?](#)

- [Do you need a degree to become a game developer?](#)
- [What skills does a game developer need?](#)
- [Places of employment for game developers without a degree](#)
- [Steps to becoming a game developer without a degree](#)

Now, let's get started by looking at some of the key job responsibilities of game developers.

What does a game developer do?

In very broad terms, a game developer is a professional involved in the process of creating a video game.

For example, a game developer can be responsible for designing the look and feel of the games, creating the storylines, scripting the action, developing the characters, writing the music and sound effects, and even testing the finished product to make sure they work properly.

All of the aforementioned responsibilities can acquire very different skill sets, which means that game development usually takes place in large teams of programmers, artists, animators, sound designers, and other professionals. For example, a release from Ubisoft can have [teams of up to 600 people](#) working on it.

However, there are notable exceptions – several highly successful indie video games have been created by teams consisting of less than 5 people.

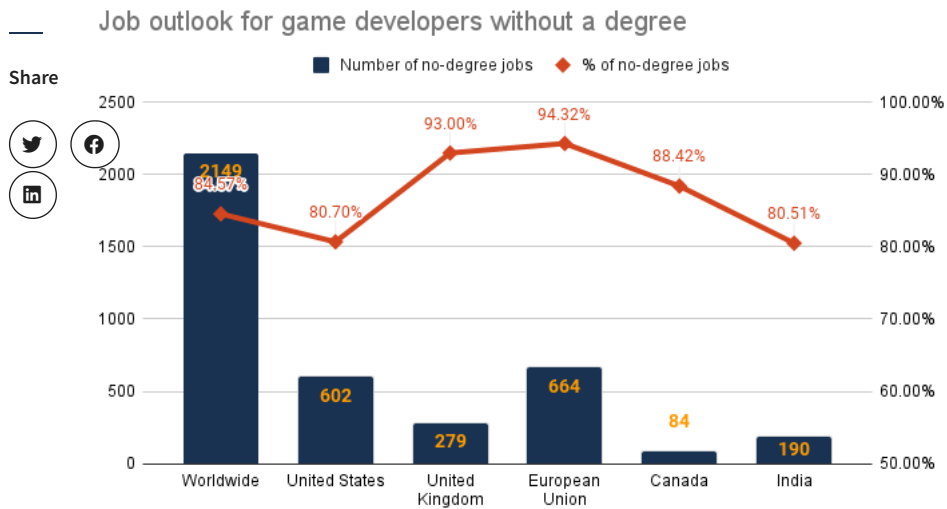
And, to share some even more extreme examples – [Markus Persson created Minecraft](#) as a one-man development team. Further, Persson did not have a degree related to video game design at the time of creating Minecraft. In fact, he never even finished high school.

So if you're interested in becoming a game developer, don't let a lack of a degree or industry connections hold you back!

Do you need a degree to become a game developer?

No, you do not need a degree to become a game developer. For employers, your skills and portfolio are far more important than having a college diploma, and the data we gathered shows that more than 84% of open game developer jobs worldwide do not require a degree.

Take a look at this chart to see the distinctions between countries:



Job outlook for game developers without a degree. Data: LinkedIn Job Search (2022).

Here are the exact figures:

- Worldwide, there are **2,149** no-degree game developer jobs available out of a total of **2,541**. Thus, **84.57%** of game developer jobs worldwide do not require a degree.
- In the United States, there are **602** no-degree game developer jobs available out of a total of **746**. Thus, **80.70%** of game developer jobs in the United States do not require a degree.
- In the United Kingdom, there are **279** no-degree game developer jobs available out of a total of **300**. Thus, **93.00%** of game developer jobs in the United Kingdom do not require a degree.
- In the European Union, there are **664** no-degree game developer jobs available out of a total of **704**. Thus, **94.32%** of game developer jobs in the European Union do not require a degree.
- In Canada, there are **84** no-degree game developer jobs available out of a total of **95**. Thus, **88.42%** of game developer jobs in India do not require a degree.
- In India, there are **190** no-degree game developer jobs available out of a total of **236**. Thus, **80.51%** of game developer jobs in India do not require a degree.

What skills does a game developer need?

The skills needed for game development will depend largely on the specific career path that you are planning on taking. However, there are some certain personality traits, soft skills, and hard skills that will be beneficial for anyone looking to learn game development:

Personality traits

- Creativity** – Games are an incredibly creative medium, and you need to be able to come up with new and interesting ideas if you want to develop games and be successful in this industry.
- Passion** – Video game development can be fun, but it's also a lot of hard work. You need to be passionate about games and, even more importantly, the process of developing games. Expect long, often monotonous days and nights full of coding, drawing, and testing. If you are not sincerely passionate about the nuts and bolts of video game creation, then you will burn out sooner or later.
- Patience** – As mentioned earlier, game development is a process that takes time and lots of hard work. This means that you need to be patient and willing to put in the hours required to see your projects through to completion.

Soft skills

▪ **Communication skills** – Whether you will want to work at a massive video game company or a smaller indie game studio, you will need to communicate with other members of your team (as well as people in other departments) often and effectively. Effective communication includes explaining your ideas clearly, listening to feedback, and negotiating compromises.



▪ **Problem-solving skills** – The journey from an idea to beta to the finished product is never a smooth ride. During the game development process, you and the other members of your team are bound to run into huge amount of problems. These problems can range from game-breaking glitches to artistic disagreements. Being able to solve these problems without losing your head is key to keeping the project on track and creating a quality end product.

Hard skills

As previously mentioned, the specific hard skills you need will depend on the career path you take. However, at least a basic understanding of the following hard skills is essential if you want to succeed as a game developer.

- **Math skills** – This one is pretty self-explanatory. A basic understanding of mathematics is essential for a video game designer. Why? Because a significant portion of video game development is spent on number-crunching tasks like balancing game mechanics, working out physics problems, and tweaking lighting and textures.
- **Coding** – This is the bread and butter of video game development. In order to create video games, you need some coding knowledge. This is especially true for game developers who want to make indie games, as there is usually no publisher or a massive team of artists and designers to help you out.
- **Graphic design** – Creating video game art is an essential part of the development process, and you need to be able to create 2D and 3D assets that meet the standards of the industry.
- **Audio design** – To make games that sound as good as they look, you'll need some audio design skills. This includes knowing how to use audio editing software as well as understanding the principles of sound design.
- **Testing and QA** – No matter how good your video game is, it will never be perfect. This is why quality assurance (QA) testing is so important. As a game developer, you should be familiar with common QA testing practices and know-how to use testing tools to find and fix bugs.

Places of employment for game developers without a degree

There are two main paths you can take when looking for a job in game development: large, mainstream game companies like EA or Blizzard Entertainment or indie studios like FuturLab or Ghost Town Games.

- **Mainstream game development companies** – As the name suggests, mainstream game development companies are those with hundreds or even thousands of employees. They usually have multiple departments including a publishing arm, a marketing department, and a customer service team among others. Job openings in these companies are typically advertised online or through recruitment agencies. Sometimes, employees are also recruited at massive expos like the [Games Developer Conference \(GDC\)](#) or the [Electronic Entertainment Expo \(E3\)](#).
- **Indie studios** – Indie studios are small, self-funded game development studios that create and publish their own video games. These studios are often started by a few friends who have a passion for video games and game development. Jobs at indie studios are typically advertised online or through word-of-mouth. You can also attend indie game developer conferences like [IndieCade](#) or the [Tokyo Game Show](#).

If you have the necessary skills and the entrepreneurial spirit, you also have the opportunity to start your own game development company. This can be a daunting task, but it is definitely doable with the right team, a solid business plan, and the financial resources for getting started.

One of the biggest success stories in the game development world is that of [Eric “ConcernedApe” Barone](#). Eric is the creator of Stardew Valley who created the entire game from scratch, earning him millions in the process.



Steps to becoming a game developer without a degree

Follow these steps to become a game developer without a degree:

1. [Learn the basics of video game coding.](#)
2. [Become familiar with video game engines.](#)
3. [Take an online game development course.](#)
4. [Get involved in the game development community.](#)
5. [Start building game prototypes.](#)
6. [Create a personal portfolio of games.](#)
7. [Apply for an entry-level job as a game developer.](#)

1. Learn the basics of video game coding.

The first step on the road to becoming a game developer is to start learning how to code. There are many different coding languages out there, but for someone completely green, I would advise starting with Python.

Python is widely considered one of the easiest languages to learn and is used in a variety of different industries, including game development. To learn Python from scratch, I would recommend the following online resources:

- [The Code Academy](#) – A free online coding school that teaches you how to code using Python.
- [Python for Fun](#) – Another solid resource for learning Python which includes video tutorials, quizzes, and exercises.
- [GitHub](#) – This is a code hosting platform where you can find lots of different Python projects and code snippets to learn from.

Once you have some idea of how coding works, I would also suggest starting to learn C++. This programming language is more complex than Python, but it is still the benchmark programming language when it comes to major, graphically demanding projects.

You can find a myriad of both paid and free resources to start learning C++. When it comes to free resources, I would start with [learncpp.com](#) and [freeCodeCamp.org C++ playlist](#) on YouTube.

2. Become familiar with video game engines.

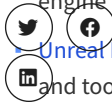
Assuming that you will not be creating your own game engine, you should also familiarize yourself with popular game engines.

A game engine is a software program that provides tools used for developing video games. Unreal Engine 4, Unity, and GameMaker Studio 2 are generally considered the most widely-used video game engines.

All three of these game engines have free versions that you can use to start developing your own video games. You can find these free versions on the official sites of the engine providers:

- [Unity](#) is generally considered the easiest game engine to learn for complete beginners to game development.

Share [GameMaker Studio 2](#) is another great choice for newbies. It is a popular cross-platform game engine that uses a drag-and-drop interface which makes it easy to get started.



- [Unreal Engine](#) is more complex than Unity and GameMaker Studio 2 but provides more features and tools for more experienced game designers.

3. Take an online game development course.

If you want to take your game development skills up a notch, there are many useful online courses that you can take. These courses will teach you the specifics of game development, such as how to create 3D models and texture maps, animate characters, and create physics simulations.

If you have already decided on which game engine you will work with, then I would start by enrolling in the courses offered by the official sites of the engine providers.

These courses are specifically designed by the game engine developers and will teach you everything you need to know in order to use it effectively:

- [Introduction to Game Design \(Coursera\)](#)
- [Unity Learn](#)
- [Introduction to Indie Games \(FutureLearn\)](#)

4. Get involved in the game development community.

One of the best ways to learn about game development is to get involved in the game development community. This can be done by attending game developer conferences, participating in online forums and discussions, or simply following developers on social media.

Conferences are a great way for aspiring game developers to learn from industry veterans. Most major game development conferences have talks and lectures from well-known developers, as well as panels and workshops where you can get hands-on experience with different aspects of game development. Attending a conference is also a great opportunity to network with other like-minded people. You never know who you might meet or what opportunities might come your way.

If you do not have the budget or spare time to travel to video game conferences, then engage with online game development communities. Some examples of online game development communities are:

- [Gamedev.net](#) – This is a large online game development community with forums, articles, and job listings.
- [Game Dev League](#) – A Discord server focused exclusively on game development. On Game Dev League, you can find developers from all over the world to chat with and collaborate on projects.
- Twitter – Following major developers is a great way for developers to stay up-to-date with the latest news in the gaming community.
- [/r/gamedev](#) – This is a subreddit for game developers. It's a great place for finding resources for learning game development and discussing the current trends in the industry.

5. Start building game prototypes.

Eventually, you are going to have to get your feet wet and start prototyping your own video games. This is where real learning happens. Making video games is a very iterative process and you will learn more from making mistakes and trying new things than anything else.

There are no set rules for [how to make a game prototype](#). Some people prefer to use scripting languages for building their prototypes, while others prefer to use game engines.

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However, as you might have guessed – you will get the most freedom as a creator if you are familiar with both a coding language and an engine.

You can find a lot of helpful resources on making game prototypes by being a part of the online game development communities. I also suggest keeping an eye on the official forums of the game engines.

6. Create a personal portfolio of games.

If you want to become a game developer without a degree, it's your portfolio that will have to do the talking. A strong portfolio will demonstrate your skills as a game developer and show that you have what it takes to work in the industry.

To ensure the best chances of success, try to optimize all of the following:

- **Your resume** – This should include a detailed overview of your skills and experience as a game designer.
- **DevLogs** – A [devlog](#) is a log of your development process, from start to finish. This can be anything from screenshots of your work-in-progress to video recordings of you working on the game.
- **Code samples** – This can be anything from a simple function to the source code for an entire game.
- **Artwork/level design** – If you have any artwork or level designs for games you've created, make sure to include them in your portfolio.
- **Game prototypes** – Bits and pieces of unfinished ideas are a useful addition to any portfolio, especially when it comes to giving your potential employers a glimpse of how creative you are. That said, unfinished ideas will never be as impressive as a playable prototype of a game you created. A playable version of a game will show all of your different talents at once and your employers will know exactly what to expect if they do decide to hire you.

7. Apply for an entry-level job as a game developer.

Once you have some practical game design experience under your belt and a portfolio for showcasing your skills, it is time to look for a job. As we already mentioned, you will need some persistence, a lot of self-learning, an impressive portfolio, and some luck to get a game development job without a degree.

For a first job in the industry, indie game studios or small-scale game development companies would be a good place to start. These studios usually don't require any formal qualifications and are more interested in your skills than in your degree. As a plus, you will also probably have more freedom as a game designer in a smaller studio.

Once you have paid your dues in a smaller studio, you might want to consider looking for a job in one of the major game studios. Big companies usually require a degree, but there are always exceptions. Especially if you have real-life experience working at indie studios.

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