

A+: My goals and how I plan to achieve them

Where would I like to work at?

There are two main branches within software engineering I am interested in, and those are cybersecurity and videogames. Since the second option is the one I would like to work at the most, I will mainly focus on that regard.

There are many videogame companies nowadays, and with the growing popularity of independent games (also called “indie games”) more teams are joining the market. Among the most famous companies, we have Nintendo, Sega, Capcom, Square Enix, Activision, From Software, EA... and there are also independent companies that, while composed by a very small group, still offer games which are far better than many AAA these days.

About the companies I would like to join, there are several options, but I would be happy to work at any videogame developing company.

-Riot Games: this enterprise has published one remarkable game, but its success has been so huge that, almost ten years after its release, it is still one of the most played PC game in the world. Their star product is called League of Legends, a MOBA strategy game in which two teams of five components fight in an arena to destroy the enemy’s nexus (that is, the core of the base) while protecting theirs.

There have been more small projects, but they were always a variant of the main game. They haven’t released other games which are unrelated to League, but they are planning to in the future, although no details have been released about said projects.

About the technology they use to develop their game, they use several tools and languages. Amongst them, one can find Java, a HTTP/JSON ReST API, Docker, GitHub, Jenkins, MySQL and rCluster, as well as their own tools created exclusively for the game, such as Admiral. Admiral is a scheduling program which communicates with Docker daemons to update the containers and checks if an action must be taken according to the player’s interaction with the interface.

-Nintendo: One of the most famous videogame companies in the world, and the one that revived the faith and the market of videogames during the crisis in 1983. It was originated by bad quality games and the bankrupt of big enterprises dedicated to this sector, the most famous one being Atari. Nintendo brought videogames back to a high spot thanks to the NES console and *Super Mario Bros* and dominated the market for a long time. Nintendo counts with several franchises which are loved all around the globe, being the most remarkable ones *Super Mario*, *The Legends of Zelda*, *Kirby*, *Metroid*, *Fire Emblem* and, of course, *Pokémon*.

Nowadays, Nintendo has recently released their newest project: Nintendo Labo. The players can craft their own peripherals, made with special cardboard, to play the game. The idea aims to develop imagination and unite people (for example, children asking their parents for help to

build the item). Having a look at last year's releases, we have *Super Mario Odyssey*, *The Legends of Zelda: Breath of the Wild* (which was the winner of the *Game of the Year Award* in *The Videogame Awards* of 2017, among others), *1-2-Switch*, *Arms*, *Mario Bros Superstars* and *Splatoon 2*.

About their current projects, there are a few videogames in development phase for now: a Pokémon game for Nintendo Switch, a new Super Smash Bros games coming this year for said console, a remake of Mario & Luigi: Bowser's Inside Story in 2019 and Nintendo Labo Robot Kit.

Nintendo uses some tools developed by the company to create their games, such as Smile Basic to make games for the 3DS, but they also used C and C++ to develop games for Wii and WiiU, and it's very likely that Nintendo Switch also uses this language, since it's been used for a long time in most of its products.

-Square Enix: this company has released some of the games that marked many people's childhoods. Examples are the Final Fantasy series (especially VI and VII), Kingdom Hearts and Dragon Quest, the Mana series and some games which had no continuation but they were well received by the audience, such as *The World Ends With You* and *Life is Strange* (although this one was developed by an indie studio which received support from the company).

Amongst their latest releases, one can find *Nier: Automata* (a game made by PlatinumGames for Square Enix), *Final Fantasy XV*, *Secret of Mana* remake, *Kingdom Hearts Dream Drop Distance* for the 3DS console and *Kingdom Hearts HD 2.8 Final Chapter Prologue* for the PS4 platform.

The languages that careers point the most at are C and C++, as well as knowledge of the tool Adobe Photoshop. They use Unreal Engine for the latest game in development, such as a *Final Fantasy VII* remake and the long-awaited *Kingdom Hearts III*.

-An indie company: whether it is an already composed one or a studio I own, it would also be an interesting experience to work as a game developer in an independent company. The risk is very high and success is hard to achieve, but the advantages of being an independent developer include making a game as you want it to be, with all the freedom and originality that it entails. Examples of games that have earned a place in people's hearts are *Undertale*, *Cuphead*, *Shovel Knight*, *Outlast*, *Hollow Knight*, *Life is Strange* and *Hiveswap*.

The software used by these companies is usually Adobe Photoshop to make the sprites or the textures for 3D models, Unreal Engine or Unity (which is based on C#), and in order to fund their projects and promote themselves they use websites such as *Kickstarter* and Steam platform or Nintendo eShop to release their games to the world.

While working at these companies would be perfect, I would be happy if I manage to work at smaller videogame companies. There are some companies in Spain which are interesting, like Locomalito, The Game Kitchen and Genera Games. This country is currently placed between the 8th and the 9th place in the rankings of game developing.

What will I do to get there?

There are several steps that must be done in order to improve my chances to achieve my goals. They are not listed in a particular order, as they are equally important.

First, I must finish the Software Engineering degree. While I am at it, I will learn the basics of some software tools. Examples are Unity to develop videogames, Jenkins to understand how to work with continuous integration, organization managers like JIRA or RedMine, and some programming languages (mainly reinforce my C skills and learn C++ and C#), as well as improving my techniques with Adobe Photoshop. This is focused on producing small games which, while not good enough to be released to the market, will give me necessary basic knowledge about videogame programming. As a TFC, I will make a videogame as a starting point in the world of videogame developing and videogame design. I will surely need to improve my drawing skills to prepare concepts of level design, character design and general looks of the videogame. I will also improve my English level and get the B2 level and, if possible, the C1 level. I shall probably have to learn another language, most likely German, but this is an option that is not on my top of the To-Do list yet.

After I finish the degree, I will study a master degree focused on videogame developing and videogame programming, while also learning about Unreal Engine after I am done with Unity. I will surely have to live in Madrid or Barcelona while I am studying, since those are the cities where the best master degrees dedicated to videogames are located at. The next step after finishing the master degree would be working at a company, whether one whose projects are related to videogames or another software-related branch. This will give me vision about the labral world, teach me how to work in an enterprise environment, learn the newest technologies and most needed positions at the moment and general experience that will aid me to reach higher places. During this period, I would still be making small projects on my (surely short) spare time to learn new features to add in more serious games.

Then, after I gather enough experience, I would attempt to join a videogame company (if I am not already in one) and climb from there. I would start on smaller videogame companies and gain more experience building towards game developing and game design, and, if I am good enough and a bit lucky, I will get where I want. I do not really mind whether it is a huge worldwide company such as the ones mentioned in the previous section or a medium-small one: if it is focused on producing videogames, I would be more than glad to be part of it.