

■ PERSONAL INFORMATION

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● **Name and Surname**

Manuel Rodríguez Matesanz

● **Date of Birth**

01 / 04 / 1995

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🌐 **Website and Portfolio**

<https://www.manuelrodriguezmatesanz.com>

🌐 **LinkedIn**

<https://www.linkedin.com/in/manuel-rodr%C3%ADguez-matesanz-061563131/>

■ PAPERS - RESEARCH

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[Sensors \(2022\): A New Immersive Virtual Reality Station for Cardiopulmonary Resuscitation Objective Structured Clinical Exam Evaluation. DOI: 10.3390/s22134913](#)

■ PROFESSIONAL EXPERIENCE

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Jun. 2018-Now

**Polytechnic University of Madrid - GBT group**

Researcher and software developer specialized in XR technologies for medical training

Research focused on the use of new extended reality (XR) technologies for developing tools and simulations to improve medical training. Unity Engine (C#) and Unreal Engine (C++) are used as development software for such as HTC Vive, Meta Quest, Hololense 2, EEG Emotiv Epoc, Arduino or Tobii Eye Tracking system. As part of my PhD thesis, a runtime editor for creating Virtual Reality tasks is being developed.

Jan.-May

2018

**Smile and Learn**

Game Developer in Unity Engine

As part of my Master thesis, I developed four games that were included in Smile and Learn's core application with Unity Engine. These apps were created independently from the ground up and exported as Asset Bundle packages to the main application. These applications used "Painting on canvas", "drag and drop puzzles", "Sequenced animations" and "form detection" mechanics.

Jun.-Aug

2017

**Coordinación de Seguridad y Proyectos (CSP)**

Game Developer in Unity Engine

Gameplay developer of a game called "Risko": A multiplayer game destined to teach Spanish scholars about risk prevention. This project was part of a college 3 month scholarship of the Education Ministry of Spain.

## ■ OTHER NON-PROFESSIONAL EXPERIENCE

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### 2018-Now Degree Projects Research

Polytechnic University of Madrid – GBT group

As part of my work as researcher I guide degree and master scholars' final projects and do some research about them. All of them are related to simulation and XR technologies: CPR simulation, suturing simulation, soft-body mesh deformation, rope and fluid physics, pre-operative planning, EEG signal inputs for controlling virtual environments...

### 2017-Now Manu Games / Virtual Phenix Games

Solo Game Developer

Solo game and XR experience development with Unity Engine, Unreal Engine, Game Maker and RPG Maker with projects released on Google Play and itch.io. I got experience developing software for Android, iOS, Universal Windows Platform (UWP), Windows, MacOS, Linux, Nintendo 3DS, Nintendo Switch and Xbox; and XR technologies for Virtual Reality, Mixed Reality and Augmented Reality.

### 2016-Now Homebrew Scene

Programmer

Creation of homebrews for 3DS, WiiU and Nintendo Switch in C++. Setup of environments tutorials for homebrew development and currently creating a 3DS and Nintendo Switch game engine for Windows, MacOS and Linux with DevkitPro compiling.

### 2016-Now HydregonArt

Creature Designer and Illustrator

Pokémon-like creatures' design and illustration and released on DeviantArt.

### 2016 Bumblebug Games

Programmer, digital artist and concept artist

Gameplay programming, concept art and pixel art in Javascript for web games (TRekt, Evolution Saved Me...) and released in itch.io.

### 2015-2016 Colegios El Valle

Leisure Time Monitor

Leisure Time Monitor in summer camps, trips being their caretaker. Responsible for their physical, cognitive, communicative and creative development.

2015            **Team Gotham**  
Quality Assurance (QA)

Part of the QA team for the game "*The Guest*".

## ■ ACADEMIC EDUCATION

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Sep. 2022-Now    **PhD Thesis**  
Polytechnic University of Madrid (UPM)

PhD thesis focused the use of eXtended Reality (XR) technology for medical training.

Sept. 2021-May 2022    **Master in Biomedical Engineering and Telemedicine**  
Polytechnic University of Madrid (UPM)

Master degree in Biomedical Engineering and Telemedicine (required for starting the PhD thesis).

Sept. 2017-May 2018    **Master in Computer Graphics, Games and Virtual Reality Development**  
Rey Juan Carlos University (URJC)

Master degree in Computer Graphics, Games and Virtual Reality development, the 4<sup>th</sup> highest rated master's degree in Europe related to software, simulation and games.

Sept. 2013-May 2017    **Degree in Videogame Design and Development**  
ESNE / Camilo José Cela University

Degree specialized in Videogame design and development with Unity Engine and Unreal Engine, as well as low-level programming for computer graphics applied to videogames.

## ■ OTHER ACADEMIC EDUCATION

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2013-Now            **Udemy & Zenva Courses for Game Development**  
Multiple game development online courses with Unity and Unreal Engine.

2013                **Online courses of Videogame Development in Game Maker Studio**  
YoYo Games

Game Development online course for learning how to develop games in Game Maker Studio.

- Jun.-Aug.**  
2013
- Course "Cross of the Entrepreneur"**  
Universidad Camilo José Cela
- Learning and developing skills for undertaking projects and getting success in the world of work.
- Jun. - Aug.**  
2015
- Intensive course of Videogame Design**  
Universidad Internacional Méndez Pelayo (Santander)
- Intensive learning about how to design videogames.
- Jun. - Aug.**  
2015
- Leisure Time Monitor + First Aid course**  
Cruz Roja (Red Cross)
- Learning and practicing skills for beign a professional leisure time monitor for camps and trips and being able to save people's life if needed.

## ■ PROFESSIONAL SKILLS

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### LANGUAGES

Spanish	Maternal Language
English	Advanced Level
French	Beginner Level

### IT

- Knowledge in:
  - XR software development for Mixed Reality (Hololense 2 + UWP), PCVR (OculusXR/OpenXR), Meta Quest standalone and mobile devices (Cardboard XR)
  - Game Development with Unity Engine and Unreal Engine for multiple platforms including consoles.
  - Native mobile application development with Android Studio and IONIC.
  - Coding Languages: C#, C++, Python, Java, Javascript...
  - Video and Illustration edit with Adobe Pack
  - Microsoft Office and LaTeX for documentation and research paper writing.

## ■ OTHER INFO

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- Driving licence and my own car.
- Fully available for travelling.
- I learn fast and I can adapt myself easily to changes.
- Manga, Anime, Videogame and Console Collector.
- Cosplayer in my free time.
- Fan-game developer.
- Digital Artist in my free time.
- I love participating in RPG Tournaments (Pokémon...)