# Curriculum Vitae

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## Personal dates

**Name:** Marc Gironés Dezsényi

**Nationality:** Spanish

**Date and place of birth:** Vilobí d'Onyar (Girona), 4th of July in 1988

**Age:** 34 years

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## Academic Formation

**Universitat Pompeu Fabra**          **2013 - 2014**
**Master's degree in Video Game Design**

**Universitat de Barcelona**          **2009 - 2013**
**Bachelor's degree in Computer Engineering**

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## Professional experience

**Win Systems**          **2019 - PRESENT**
**Software Development TEAM LEAD**

Leading development of new slot platform.
- HW library for Quixant and Axiomtek embedded computer box
- Devices like Ticket Printer, NFC, Bill Acceptor & Diverter, Coin Acceptor
- Leading implementation of core platform to the Unity engine. Math Library, Progressive Library, Slot Component

**Senior C# Game Programmer**

Analysis and implementation of improvements and technological updates for slot games at Spanish market.
**Technologies:** C#, DirectX; SlimDX, Azure DevOps Server

**Dragon Coins**          **2021– PRESENT**
**(Founder – Project Manager)**

SIDE PROJECT. It is a free, single-player, casual mobile game for Android & iOS. It has had over 10K downloads.

The core loop of the game is a traditional slot machine where player spin the slot machine, gain coins, build his village, and unlock new levels.

**PvP Gameplay**: There are two possible spin outcomes that open PvP gameplay: **attack and raid.**

**Dragon Collection:** The dragons join the players in the game and help them advance faster.

**Responsibilities:** Project Management, Game Design, Negotiation with Publisher, Backend development

## CIRSA - Unidesa                           2016 - 2018
**Game programmer (**C++ Game Programmer)

Programming of slot and bingo games, technical support and maintenance of updates. Develop of the new multi bingo games of Cirsa a sold under the brand named **MyBingo**.
**Technologies**: OpenGL, C++ and Internal Costum Script.

## Digital Legends Entertainment            2015 - 2016
**Afterpulse** (Gameplay / C++ Programmer)

Architecture, design and implementation of games for native mobile platforms, currently Apple iOS.

The technologies used in the project are: **Visual C++( Visual Studio )**
Using project management tools such as: **Jira, Confluence** and **Plastic SCM.**

## Barcelona Digital Technology Center       2013 - 2014
**eKauri**  (Junior Programmer)

EKauri is an e-health and smart home platform that empowers seniors to gain autonomy, participate in modern society, and achieve independence through ICT-based solutions.

I was responsible for the design and develop of videoconference API based on WebRTC technology, support voice and video conference between Android and PC.
The solution was developed on **Java, Python, GAE** and **WSO2.**

## Barcelona Digital Technology Center       2012 - 2013
**Saapho** (INTERSHIP)

The main objective of SAAPHO is to support Active Ageing by assisting seniors to participate in the self-serve society preserving and enhancing independence and dignity through the application of innovative ICT-based solutions.

My primary responsibility was develop a Social Gateway. The objectives of this gateway are providing communication tools to discuss, activities with friends, share photos and videos via Facebook, Twitter and Google+.

The system was developed in **Spring Framework, Spring Social, Spring Security, MySQL, SOAP** and **Hibernate**.

| Projects & Publications | **Insomnium Engine** | 2018 – 2020 |
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**(HOBBY PROJECT)**

I started developing my hobby game engine in January 2018. Designed for cross platform for Windows, Linux and iOS, later in iOS and Android. It's written in **C++11, OpenGL and LUA scripting**. (**UI system, Entity Component System, State scripting, Deferred rendering**)

**Publications**                                              2018

In 2018, launched my personal blog where I start to write about programming related post. Posts has vary in content but mainly programming related.
Most of them will be Proofs of Concept but I'm planning on writing about some general Computer Science.
**Publication**: Macros-X , Polymorphic wrapper in C++ and mora

**Daisho**                                                    2015

It's a 3rd person combat game with platform elements, developed by 3 artist and programmers under own game engine (**C++** & **DirectX 11**) to PC.
  My primary tasks was integrate scripting game AI, physic and graphics engine.

**Human motion capture with KINECT (AR)**      2014

It is application which capture the human movement with depth and the color camera and translate these movement on the virtual character.

The application was developed on **C++** and **OpenGL** and used libraries of OpenNI and Primesense. And to make character rig I was reused Pinocchio Project ( SIGGRAPH 2007 )

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## Languages

**English:** Level B of spoken and written

**Catalan:** Intermediate level of spoken and written (Universitat de Barcelo

**Spanish:** Intermediate level of spoken and written (Escola Oficial de Idior

**Hungarian:** Native level

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| Technique knowledge | **Software engineering and UML.** |
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**Tools knowledge:**

- IDEs: Visual Studio, Eclipse and Netbeans
- Game Engine: Unity, Unreal,
- Version control tools: Plastic SCM, JIRA, Git and Subversion
- Tools for modeling: 3D Studio Max, Blender
- Tools: Renderdoc by Crytek, VS Frame Analysis, AntTweekBar

**Experience to develop game IA:**

- Intelligence based on Behavior tree, Finite State Machine
- Path finding (Dijkstra and A* algorithm)
- LUA scripting
- Learning Algorithms

**Knowledge to develop graphics engine:**

- Deferred shading
- Parallax mapping
- Shadows and illuminations ( Cascade shadow, Pointlights, spotlights and volumetric lights)
- Planar and cubemap reflection
- Post processing (SMAA, SSAO, DOF, Bloom, Godrays, Toon shading)
- Image processing (Seam carving, Bilateral filter)

**Other knowledge:**

- "Component Base Engine"
- Raycast, collisions, Mesh cooking, Actor controller on **Physx**
- Web Service, Spring Framework and Social Spring
- Extensive experience in design and coding of MySQL, NoSQL and msAccess databases
- General knowledge of data mining

**Experience in program languages:**

- 6 years in C++ (C++11 & C++14)
- 4 years in C#
- 5 years in DirectX11, OpenGL, HLSL and GLSL
- 4 years in Android, Java and C
- 1 year in LUA scripting, MaxScript
- 3 years in Python, Matlab, HTML, JSP, Javascript and Servlet