

Joan Marquès

VIDEOGAME DEVELOPER | PROGRAMMER

CONTACT



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[Portfolio](#)

[Linkedin](#)

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HARD SKILLS

Gameplay and engine programming
Debugging & Performance Profiling
C++ (Modern C++ standards)
Engine Architecture & Systems Design
Object-Oriented Programming (OOP)
Clean and Maintainable Code

SOFTWARE

Unity / Unreal / Godot
Custom Engines (C / C++ / OpenGL)
Visual Studio / Visual Studio Code
Git & GitHub
Trello

SOFT SKILLS

Teamwork & Collaboration
Problem-Solving & Critical Thinking
Focused & Detail-Oriented
Perseverant and Hard-Working
Friendly and Positive Attitude
Perfectionist Mindset (strives for quality)

STUDIES

Bachelor's Degree in Video Game Design and Development
UPC – CITM (Barcelona, Spain)
2022 – Present (last year)

Advanced Vocational Training in Software and Game Development
Escola Pia (Granollers)
2020 – 2022

ABOUT ME

C++ Gameplay & Engine Programmer specializing in **scalable gameplay systems** and **architecture**. Passionate about bridging the gap between low-level optimization and fun player mechanics. Currently developing a custom 2D engine to master Data-Oriented Design and create robust tools for gameplay implementation.

WORK EXPERIENCE

INTERFACE DESIGN TEACHER (VOCATIONAL TRAINING)

Escola Pia (Granollers) 2024 – Present

Teaching interface design and application distribution for vocational students (DAM + Video Games). Focused on UI/UX in video games using tools like **Unity**, **ImGui** and **OpenGL**.

GAME QA TESTER – INTERNSHIP

ScareCrow Studio (Sabadell) 2021-2022

Tested a point-and-click adventure game. Reported bugs of various types including visual glitches, game-breaking problems, dialogue inconsistencies using Trello for task management and communication with the development team.

PROJECTS

Custom C++ 2D Game Engine focused on Data-Oriented Design and memory optimization.



Architecture & Gameplay: Integrated **EnTT (ECS)** to decouple systems (Physics, Scripting, Rendering), ensuring cache locality and scalable gameplay code.

Memory Management: Enforced strict resource ownership using custom **Smart Pointer wrappers (RAII)** to automate cleanup and eliminate memory leaks

Core Loop: Designed a modular loop separating **Update** and **Render** logic to ensure clean execution flow and scalability.



Hawk Engine is a custom 3D engine developed collaboratively in C++. **UI System:** Developed a custom **In-Game UI System** for interactive menus and HUDs.

Core Tech: Implemented **Modern OpenGL** rendering pipelines (Shaders) and an efficient **Resource Manager**.



Controlled is a Roguelite, FPS game made with **Unreal Engine 4**. Developed modular Character Mechanics and a replicated Inventory System. Implemented scalable architectures for Abilities and Weapons.



Sky Fox is a dropper game made with **Unity** for "Brackeys Game Jam 2023.2". My job: player mechanics, upgrade system, save/load and game feel.