

MIQUEL SUAU GONZÀLEZ

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GitHub: <https://github.com/MayKoder>

Portfolio: <https://maykoder.github.io/maykoder/>

Passionate software developer with expertise in C/C++, OpenGL, and Vulkan, specializing in real-time graphics, game engine development, and optimization. I thrive on creating innovative gameplay mechanics, enhancing rendering pipelines, and pushing the limits of computer graphics for immersive experiences.

PROFESSIONAL EXPERIENCE

Zitro Laboratory, Sant Quirze del Vallès, Barcelona

2022 – Present

Junior to Senior C++ Engine Developer

- Developed and optimized an OpenGL-based camera system, simplifying hardware integration across products.
- Enhanced rendering efficiency by optimizing the graphics pipeline.
- Designed and implemented new engine functionalities while maintaining code standards.
- Contributed to the full development cycle of multiple products, launching them globally.

NUSKU CLOUD, Madrid

2025 – Present

Freelance Full-Stack Web-App Developer

- Developed a Flutter-based web app for managing subscriptions and AI-powered fire detection hardware.
- Built and integrated a REST API, managing communication between the frontend and backend.
- Implemented Auth0 authentication, real-time hardware monitoring, and CI/CD automation for deployment via Azure and GitHub Actions.

UPC School (Polytechnic University of Catalonia), Terrassa, Barcelona

2022 – Present

College Lecturer

- Instructor for 'Game Engines' & 'Graphics Programming' courses in the official Video Game Development degree.
- Taught students game engine architecture, rendering techniques, and post-processing effects using C++ and OpenGL.
- Guided students in building their own game engines from scratch, applying industry standards and best practices.

The Brain Therapy, Barcelona, Spain

2021 – 2022

Intern to Junior Software Developer

- Developed the frontend and backend for the startup's main application.
- Built a Python-based tool for secure database management, improving data handling efficiency.

Valking, Barcelona, Spain

2021– 2022

Mobile Application Developer

- Developed three mobile applications using Flutter, including:
 - A subscription management platform.
 - A video streaming service.
 - An automated upgrade tool.
- Led both backend and frontend implementation, ensuring smooth functionality and scalability.

EDUCATION

Image Processing and Multimedia Technology Center, Terrassa, Spain

2018-2022

Bachelor's degrees in Video Game Design and Development

- Honors Grade in PROG1VJ (Top 2 students in class).
- Best Game Engine Award (Only 1 awarded per class).
- Erasmus exchange program at Glasgow Caledonian University.
- Taught coding classes during summer breaks for children and teenagers.

SKILLS & OTHER

Programming Languages

C, C++, C#, Dart (Flutter), Python, JavaScript, Java, GLSL, CMake, Make, React

Engines & Frameworks

Unity (2D/3D/VR), Unreal Engine, Godot, Diamond Engine (custom-built)

Graphics & Tools

OpenGL, Vulkan, SDL2, Maya, Tkinter, MonoRuntime, HTML, CSS

Development & Workflow

Git, GitHub, CMake, CI/CD (Azure, GitHub Actions), Firebase, Jira

Languages

Spanish (Native) | Catalan (Native) | English (C1 Certified)

Volunteer Work

Assisted at Canòdrom (2021), helping organize technology-focused events.

HIGHLIGHT PROJECTS

Diamond Engine

A lightweight C++/OpenGL game engine with component-based architecture and C# scripting support.

- Developed a custom rendering pipeline, including real-time lighting and post-processing effects.
- Implemented a scene management system and C# scripting integration via MonoRuntime.
- Designed a game object system inspired by Unity's ECS (Entity Component System).

The Mandalorian: Ashes of the Empire

A fan-made Star Wars action game built entirely in a custom engine.

- Developed using Diamond Engine, featuring real-time rendering and physics simulation.
- Implemented AI behavior trees, UI systems, and game mechanics.

Mythology-Parade

A fast-paced RTS game developed by a team of 8 students in 3 months.

- Led gameplay programming, implementing unit AI, combat mechanics, and pathfinding.
- Optimized rendering performance, achieving a smooth experience on low-end hardware.