JOEL VINAROZ GIMÉNEZ

GRAPHIC & VIDEO GAME PROGRAMMER

CONTACT

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💼 Joel Vinaroz Giménez

ABOUT ME

I am Joel, a curious person by nature, always looking to understand how things are made. This curiosity was sparked when I started playing video games, leading me to discover my passion for programming.

I am fascinated by graphics and gameplay development, and my goal is to create interactive experiences that excite and immerse players. I am constantly learning and honing my skills to contribute meaningfully to every project I am involved in.

EDUCATION

SEPTEMBER 2024 - MAY 2025

SHEFFIELD HALLAM UNIVERSITY, SHEFFIELD

- **BSc Hon Computer Science for Games**
- Specialized in graphics programming with techniques like Global Illumination.
- Developed a custom game engine with PlayStation 5 support.
- Gained experience with real-time rendering and low-level graphics APIs.

OCTOBER 2021 - JULY 2024

ESAT, VALENCIA

- **BTEC Level 5 HND in Computing**
- Developed strong programming fundamentals across various disciplines.
- Discovered a passion for graphics and gameplay programming.

SKILLS

- C/C++/C#
- Assembly Language (ARM)
- Python
- LUA

• Unreal Engine	• Visual Studio
• Unity	• Git
	• Perforce
• OpenGL	• RenderDoc
• DirectX 11/12	• Nsight
• AGC (PS5)	• Trello/Jira

LANGUAGES

- Spanish (Native Proficiency)
- English (IELTS 7.5 - 2024)
- Catalan (Native Proficiency)

WORK EXPERIENCE

Tiny Terrors Studio, Valencia   OCTOBER 2023 - JUNE 2024
Gameplay Programmer

- Worked on Shelley Manor development, a third person puzzle game, with fixed cameras in the style of the old resident evil games developed in Unreal Engine 5.2.
- Developed the functionalities of the main character (Alex), some gameplay interactables (placeables and launchables) and the AI of the first boss (Dracula).
- Available on Steam.

HIGHLIGHTED PROJECTS

PS5 Game Engine & Demo   JANUARY 2025 - MAY 2025

- Collaborated in a team of programmers to develop a custom game engine and a playable demo targeting PlayStation 5 hardware.
- Implemented a local split-screen multiplayer system and a 3D audio engine running on a separate thread for spatial sound.
- Developed core gameplay systems, including player interactions with world elements such as levers and triggers.
- Built a packaging pipeline to compile and deploy the game as an installable PS5 application, working directly with PS5 devkits.

SSGI in DirectX 11   SEPTEMBER 2024 - DECEMBER 2024

- Implemented a real-time Screen Space Global Illumination (SSGI) technique in DirectX 11 to enhance indirect lighting in scenes.
- Developed a GBuffer pipeline to store necessary scene data and designed an efficient sampling strategy to approximate light bounces.
- Optimized the implementation to balance visual quality and performance, addressing challenges such as noise reduction and temporal stability.
- Conducted research on the impact of Global Illumination on visual realism and performance in games as part of my dissertation.

Elysium Engine   OCTOBER 2023 - MAY 2024

- A multi-thread custom engine written in C++ that uses OpenGL and DirectX, and integrates physics, sound and physically-based rendering.
- Worked on the ECS, a resource manager, the OpenGL integration (buffers, programs, textures, lights, shadows, etc.), PBR, Screen Space Reflections and a procedural terrain generator.

The Son of Chronos   MARCH 2023 - MAY 2023

- A VR game based on motion sensors inspired by the unique gameplay mechanics of Super Hot to craft an immersive experience, where time only moves forward when the player moves. Developed in Unity.