

Nacho Avilés C++ Developer

✉ igavya@gmail.com <https://nachoavil.es/> 📄 Working Holiday Visa



👤 Profile

Hi, I'm Nacho. As a C++ developer, I'm deeply focused on graphics programming, optimization, and system architecture. I've gained hands-on experience with Sony's PlayStation 5 API, built custom C++ OpenGL engines, and developed for Unreal Engine, working on online multiplayer functionality and post-process plugins. I'm a fast learner, excellent at adapting, and I am continuously trying to push myself further. Let's work together!

📁 Projects

WANTED: Yokai Uprising, Online Co-op Unreal Engine on Steam [🔗](#) 09/2023 – 06/2024

- Developed **Multiplayer Replication** Gameplay Features
- Designed and implemented **Sound Manager** System, Managed **Attenuation**, **Sound Mix**
- Programmed most of the **UI** and **Menu/Game State**
- **Optimized Particle Systems**
- Worked in a multidisciplinary **16 people** team using **AGILE** methodologies and **Trello**

PS5 Engine (solo) and CHEE22 Game (group effort) 09/2024 – 05/2025

- Worked with **Sony's** Proprietary AGC Console API
- Developed a data-oriented resource loading pipeline and implemented **PBR deferred lighting** for the PS5
- Integrated a **Unity project** to function as a level editor, aiding content creation for the custom engine
- Developed core gameplay code and features within a **SCRUM framework**, using **JIRA** for task management
- Applied rendering knowledge to design and implement post-processing effects and custom shaders, enhancing the game's visuals
- Supported designer workflow by building and iterating GameMaker prototypes for early gameplay testing

Obsession Engine, C++ Graphical Rendering Engine (group effort) 09/2023 – 05/2024

- Built up a **Multidraw Indirect, Command Buffer** approach
- Worked on **Data-oriented Entity Component System** (Optionals, Templates)
- Designed and implemented a high-performance, **multi-threaded Job System** utilizing futures and semaphores for efficient task parallelization
- Integrated **advanced rendering techniques**, including **SSGI** and **SSAO**
- Leveraged **Deferred Rendering**, **Bindless Textures**, and **Compute Shaders**

Long Exposure Post-Process, Unreal Engine C++ Plugin (solo)

- Extra post-process pass seamlessly integrated **without** modifying the engine source
- Very low frame budget consumption (<~0.6 ms)
- Effect accumulates over time
- Console variables for parameter control

🧠 Skills

Languages

- C++ (4 yrs)
- C (4 yrs)
- Lua, Python (2 yrs)
- Zig, Jai (1 yr)

Graphic APIs

- OpenGL DSA (3 yrs)
- GLSL (3 yrs)
- Sony PS5 AGC (1 yr)
- PSSL (1 yr)

Software

- Git, Perforce (4 yrs)
- Visual Studio (4 yrs)
- NVIDIA Nsight (3 yrs)
- Razor GPU (1 yr)

Game Engines

- Unreal Engine (3 yrs)
- Unity (2 yrs)
- GameMaker (4 yrs)

🎓 Education

HND Computing, Escuela Superior de Arte y Tecnología [🔗](#)
Graduated with **Distinction**

Valencia, Spain

Bachelor's in Computer Science for Games, Sheffield Hallam [🔗](#)
Graduated with **First Class**

Sheffield, UK