Juan S. Avilés Yáñez

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🔗 https://juanaviles.dev/

Professional Experience

Software Engineer, 3DR ⧉   04/2025 – 10/2025
As a software engineer in 3DR, my work was mainly focused around **R&D** and   Valencia, Spain
optimization, leveraging techniques like **instancing** and researching **triplanar texture mapping**.

Projects

PS5 Engine, Data driven, C++ 3D engine for PS5 using Sony API.   09/2024 – 05/2025
- **PBR** lighting system with **material** support.
- Scene **serialization** using **json**.
- Fully **deferred pipeline**.

Shelley Manor, Steam published third person immersive puzzle game.   09/2023 – 07/2024
- Developed **custom level streaming** system.
- Developed **save game** functionality.
- Worked on **boss AI**.
- Aided with **steamworks** and **publishing**.
- Collaborated in a **16 person** cross disciplinary team of programmers, designers, and artists using Agile methodologies and **Trello for project management**.

Obsession engine, C++ 3D engine with focus on AZDO programming.   09/2023 – 05/2024
- **Multidraw indirect** with **bindless textures**.
- OpenGL **DSA** (Direct State Acess) API.
- Fully integrated **job system** with support for **futures**.
- Fully **custom ECS system** with focus on performance.
- **SSGI** (Screen space global illummination).
- **SSAO** (Screen space ambient occlusion).
- Fully **deferred rendering pipeline**
- Usage of **compute shader pipeline**.

PS5 Local chess game   01/2025 – 04/2025
- **Built a standalone level editor in C++ using ImGui**.
- Setup **gameplay framework.**
- Worked on **GPU accelerated particle systems** (Compute driven).

Skills

Languages	Graphics frameworks	Game engines	Software
- C, C++20	- OpenGL (GLSL).	- Unreal Engine	- RenderDoc
- Rust, Jai	- PS5 Api (PSSL).	- Unity	- NVIDIA Nsight graphics
- Python, Lua, C#	- DX12 (HLSL).	- Godot	- Git and Perforce
		- Gamemaker	

Education

Computer Science for Games, Sheffield Hallam University   09/2024 – 05/2025
Graduated with First Class Honors.   Sheffield, England

HND in Computing, ESAT - Escuela Superior de Arte y Tecnología   10/2021 – 06/2024
Graduated with Distinction   Valencia, Spain