

JUAN PACHECO

GRAPHICS, TOOLS, AND ENGINE
PROGRAMMER

CONTACT

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EDUCATION

**BACHELOR OF SCIENCE IN
COMPUTER SCIENCE IN REAL
TIME INTERACTIVE
SIMULATION (RTIS)**
[Digipen Institute of Technology](#)
[Europe-Bilbao](#)
2019 — 2023

| SKILLS

- Time management: Managed to finish both rasterizer API ports under the established target time (3 months).
- Adaptability: Jumped between different programming languages and codebase sections easily for different tasks.
- Self-learning: Learnt Vulkan, Raytracing Theory, and more graphics topics for different projects.

| PROGRAMMING

- C/C++
- Vulkan
- D3D12
- Metal
- Nintendo Switch Graphics API (NVN)
- OpenGL
- RenderDoc
- Nvidia Nsight
- Nintendo Switch GPU Debugger
- Xcode GPU Debugger
- Perforce
- Git

| LANGUAGES

- Spanish – Native
- English – C2 Level

PROFILE

Graphics, Tools, and Engine programmer with three years in the industry, currently working at Grip Studios as a Rendering Engineer. I love developing games, creating applications, and programming with C++ in my free time.

PROFESSIONAL EXPERIENCE

Rendering Engineer

[Grip Studios](#) / March 2026 – Present

- Porting and optimizing an undisclosed AAA game to Xbox Series S/X.

Graphics Engineer

[Super Evil Megacorp](#) / April 2023 – March 2026

- Researched and implemented graphics techniques in our in-house engine, such as PBR Bloom, Cascaded Shadow Maps, Atmospheric Height Fog, HBAO+, Global Illumination and SSAO Spatial and Time Denoiser, Upscaler, GPU Queries, Antialiasing, etc, across our various APIs (OpenGL, Vulkan, D3D12, Metal, and NVN).
- Developed tools for our games and editor, such as a GPU Profiler, Shadegraph Nodes, Post-Processing Volumes, Marquee Selection, Outline for selected objects, etc, to ease the development of our games.
- Improved performance, fix bugs, implement quality of life changes, and maintain our technology and code across PC, Mac, Android, iOS, Nintendo Switch, and Xbox X.

SHIPPED GAMES

[Teenage Mutant Ninja Turtles: Splintered Fate](#)

Super Evil Megacorp

PC – Switch 1 – Switch 2 – Xbox S – Xbox X – PS4 – PS5 – iOS

- Ported our in-house engine to the Nintendo Switch Graphics API (NVN) to release our game on Nintendo Switch with improved performance and memory usage.
- Researched and implemented different Antialiasing (LXAA and FXAA) and upscaling methods to run the game at higher resolutions when the Switch was docked.

[Blood Line: A Rebel Moon Game](#)

Super Evil Megacorp

Android – iOS

- Ported our in-house engine to Vulkan to improve performance and allow our engine to use multi-threaded rendering in Android.
- Implemented new techniques and tools to improve the game graphics, performance, and development.

PERSONAL PROJECTS

[Human Skin Simulation](#)

2023 – 3 Months

- Developed a fully working human skin (of 3 layers) simulation described in GPU Gems 3 using Vulkan.
- Researched and developed subsurface scattering simulation using a combination of diffusion profiles, texture-space diffusion, stretch maps, pre-scattering, post-scattering, and translucent shadow maps.
- Implemented skin reflectance simulation using the Beckmann distribution function.