

IAGO CALVO LISTA

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Senior Graphics Programmer specializing in GPU architecture, real-time rendering, and performance optimization. Proven experience across AAA game development, GPU vendor research, and high-performance computing. Deep expertise in Vulkan, ray tracing, and low-level C++, with a strong passion for Vulkan and a record of engine optimization, open-source contributions, and industry-level technical presentations.

SKILLS

Core Expertise: Real-Time Rendering, GPU Architecture, Vulkan, Ray Tracing, GPU-Driven Pipelines, Performance Analysis & Optimization

Programming: C++, C, GLSL, HLSL, Python, Lua

Engines & Tools: Unreal Engine, RenderDoc, NVIDIA Nsight, Arm Performance Studio, Git, JIRA

Platforms: Linux, Windows

Languages: Spanish (Native), English (Fluent)

SELECTED ACHIEVEMENTS

- Speaker at major industry conferences:
 - GDC 2024 — [Realistic Mobile Graphics with Optimized Ray Tracing](#)
 - Vulkanised 2024 — [Realistic Graphics with Ray Tracing on Mobile](#)
- Author of [Learn about Ray Tracing with Vulkan on Android](#) an Arm guide on how to implement mobile ray tracing
- Co-author of a peer-reviewed research paper on neural network visualization <https://doi.org/10.3389/fninf.2021.766697>

EXPERIENCE

Senior Graphics Programmer

Oct 2022 - Present

Arm

Cambridge, UK

- Lead research and development of real-time rendering and ray tracing techniques for Mali and other tile-based GPUs using Vulkan.
- Designed and validated performance optimizations influencing GPU drivers, tools, and recommended developer workflows.
- Contributed production-quality code to open-source projects (Vulkan Samples, DXC), including new samples and Vulkan extension support.
- Worked directly with Epic Games to optimize Unreal Engine features (Nanite, SM5, SM6) for mobile GPU architectures.
- Delivered external technical talks at GDC and Vulkanised, participated in frequent meetings with developers and partners.
- Evaluated experimental rendering techniques using pre-silicon GPU simulators, collaborating with hardware, driver, and tools teams.
- Represented Arm in Khronos working groups, contributing to Vulkan ecosystem direction strategy.
- Built internal engines and demos to prototype future GPU features and guide architectural decisions.
- Mentored junior engineers and authored internal and public ray tracing documentation for mobile GPUs.

Gameplay Programmer

Creative Assembly (SEGA)

Sep 2020 – Oct 2022

Horsham, UK

- Gameplay programmer on Total War: Warhammer III, a large-scale RTS with a million-plus player base.
- Responsible for DLC battle code, owning gameplay features end-to-end, coordinating design, engineering, and QA across multiple teams.
- Resolved 400+ gameplay and engine bugs, significantly improving stability and player experience.
- Identified and optimized performance-critical systems using internal profilers, Visual Studio tooling, and RenderDoc.
- Modernized large legacy codebases to modern C++, improving maintainability and long-term stability.
- Designed and implemented an automated testing system detecting 500+ data-related issues.
- Developed custom debugging tools and logging improvements, reducing QA iteration time.
- Collaborated closely with rendering engineers to maintain efficient gameplay-rendering integration.

Research Support Staff / C++ Programmer

GRMV - University Rey Juan Carlos

Nov 2017 – Jul 2019

Madrid, Spain

- Researcher and C++ developer in the Group of Modeling and Virtual Reality (GMRV).
- Contributed to EU-funded research projects including the Human Brain Project and Cajal Blue Brain.
- Co-authored a peer-reviewed scientific publication <https://doi.org/10.3389/fninf.2021.766697>
- Core contributor to the open-source visualization framework [NeuroScheme](#).
- Improved application performance by reducing loading times by 20% and accelerating graph generation by 35% through profiling and parallelization.
- Extended UI capabilities and data handling with new formats, queries, and visualization techniques.
- Delivered a cross-platform (Windows/Linux) application using C++, Qt, Boost, and Git in an Agile environment.

EDUCATION

University of Edinburgh | *GPA: 68/100 (2:1 Honours)*

Sep 2019 – Aug 2020

MSc | *High-Performance Computing with Data Science*

Scotland, UK

- Member of TeamEPCC, placing 5th at the ISC Student Cluster Competition 2020 and 3rd in the public vote.
- Strong focus on parallel programming: multithreading, concurrency, MPI, and distributed systems.
- Extensive low-level C experience covering memory optimization, I/O, profiling, and compiler optimizations.

University Rey Juan Carlos (URJC) | *GPA: 8.02/10.00 (B+)*

Sep 2015 – Aug 2019

BSc | *Game Design and Development*

Madrid, Spain

BSc | *Computer Engineering*

- Dual degree equivalent to two UK 2:1 BSc honours degrees.
- Strong foundation in computer architecture, low-level programming, and operating systems.
- Advanced coursework in graphics (OpenGL, Vulkan, CUDA), Unreal Engine, and Unity.
- Experience with distributed systems, networking, databases (SQL/NoSQL), and cloud tooling.
- Extensive project work in C, C++, Java, JavaScript, C#, and Python.
- Selected for a competitive research position during studies.