

Daniel Camba

SOFTWARE ENGINEER

C++ | Real Time Rendering | Procedural Art

PROFESSIONAL EXPERIENCE

Render Engineer *2020 - Present* Skandal Technologies (Startup)

- Leading the development of an in-house render engine from scratch in raw OpenGL, from geometry loading to shadow-mapping based on the designer's needs for architecture visualization.
- Integrated external data sources like weather, occupancy levels, and real-time sports scores, consuming APIs from C++ with custom wrapper over Qt abstractions of network and Json.
- Creation of procedural content with OpenGL, from simple patterns to (2D) fluid simulation using compute shaders.
- Enhanced contents look and feel with post-processing, from brightness and contrast adjustments to particle generation based on movement patterns using optical flow.
- Some *out of my area* small projects:
 - Developed a license system our software using Qt + Crypto libs + AWS Lambdas to validate the user.
 - Reinforced download page security using Google ReCaptcha for bots avoidance.
 - Tailored python scripts for deployment system, excel re-sorting (using Pandas), and dev-environment setup.

R&D Engineer *2018 - 2019* Bioengineering and Telemedicine Group of the UPM

- Enhanced legacy C++ projects by fixing memory leaks, resolving minor bugs, and implementing multi-threading with for improved performance.
- Contributed as a co-developer to a Unity-based 3D training environment for minimally invasive surgery tasks, enabling creation, editing, and simulation.
- Developed a web app to enhance surgeons' evaluation of students, facilitating metric's interpretation.

Backend Engineer *January - April of 2017* Profocus Studio - Internship

- Revamped the entire product reception to invoicing workflow, trimming down week-long tasks to just two days. Resulted in major time and resource savings.

PERSONAL INFO

Madrid, Spain

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<https://dabretema.com>

EDUCATION

- **BSc in Computer Science**
Vigo University (Spain)
2012 - 2017
- **MSc in Computer Graphics**
URJC University (Spain)
2017 - 2019

LANGUAGES

- **Spanish:** Native
- **English:** Professional

RELEVANT SKILLS

- C++
- Qt
- OpenGL
- Vulkan
- Python Scripting
- GameDev (Unity)
- Notion

RELEVANT SIDE PROJECTS

- **Interactive Motion Graphic**
MSc Thesis about procedural animations implemented from scratch with OpenGL + BVH motion capture files.
github.com/DaBretema/imog

Please, do not hesitate to contact me for anything at danicamba@me.com