Daniel Camba

SOFTWARE ENGINEER

C++ | Real Time Systems / 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 and movement detection (optical flow) using compute shaders.

- Optimized data for network transmission over NDI protocol for video input and output.

- Developed a license system our software using Qt + Crypto libs + AWS Lambdas to validate the user.

- Tailored python scripts for deployment system, excel re-sorting (using Pandas), and dev-environment setup.

- Reinforced download page security using Google ReCaptcha for bots avoidance.

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

danicamba@me.com

https://dabretema.com

EDUCATION

- **MSc in Computer Graphics**
  URJC University (Spain)
  2017 – 2019

- **BSc in Computer Science**
  Vigo University (Spain)
  2012 – 2017

LANGUAGES

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

RELEVANT SKILLS

- C++
- Qt
- OpenGL
- Vulkan
- Python Scripting
- Notion
- GameDev (Unity)
- Multiplatform development (Widows / MacOS / Linux)

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