John Moschos

Location: [**redacted**]
Telephone: [**redacted**]
Email: ioansmoschos@gmail.com
Portfolio: https://jmoschos.me

Professional profile

A computer science master's graduate with relevant experience in game engine development, computer graphics and photorealistic rendering. Looking for a position as a software engineer, game engine developer, 3D graphics engineer or VR/AR engineer.

Education and qualifications

09.2018 – 07.2019   **MSc Computer Science - Distinction**

University of Economics and Business, Athens

Master thesis: Photorealistic Virtual Reality - Distinction. Designed and created a graphics engine as a testbed for photorealistic VR rendering as part of a research project tied to the thesis.

- Developed the engine's capability to support multiple windows, multiple hot swappable renderers, basic CPU and GPU asset management and a customizable scene-graph hierarchy.
- Implemented a photorealistic ray tracer to simulate the user's stereoscopic vision.
- Introduced an adjustable sampling mask for "lens-matched sampling."

Scholarship: Awarded from Omilia Conversational AI Self-Service LTD.

09.2012 – 06.2018   **BSc Department of Informatics - Second-class honors, upper division (2.1)**

University of Economics and Business, Athens

Graduate thesis: Volumetric Lighting & Environment Mapping - Distinction. Added two rendering techniques on the university's graphics engine.

- Implemented light scattering caused by participating media using a post process ray-marching approach. The result was optimized by ray clipping inside the light volumes.
- Integrated environment mapping (specular IBL).

Career summary

11.2019 – 11.2020   **Leading Seaman OR-4, Computers and Networks Specialist Corps**

Hellenic Navy, Greece

Worked as part of the Computers and Network specialists' team of the Hellenic Navy as part of the mandatory army service in Greece. Selected among peers to be involved in a national security tech project for the majority of the service time.

Key achievements

- Tested and improved various databases used for the project to ensure smooth operation, stability, and timely delivery, by implementing scripts that automated the testing process.
- Evaluation and quality assurance of the project's operational goals.

Other relevant experience

03.2019 – Present   **Notable Personal Projects - Graphics Engine Development**

- **Raygen:** A game engine focused on exploring real-time applications of ray tracing. The engine is written in C++20 and uses the Vulkan API (D3D12 branch). https://github.com/RaygenEngine/Raygen.
- **Kaleido:** A graphics engine written in C++17. Its primary focus is to support the creation of multiple renderers that can be hot swapped in real-time, even while the scene is updating. https://github.com/RaygenEngine/Kaleido.

Skills summary

- **Industry Knowledge:** 3D Rendering, 3D Graphics, Ray Tracing, Path Tracing, Game Engines, Virtual Reality, 3D Math.
- **Tools and Technologies:** C++, Vulkan, OpenGL, D3D, GLSL, HLSL, Unity Engine, C#.
- **Familiarity:** Unreal Engine 4, Python.