Nick Marmaras

Software Engineer

CONTACT

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Languages: English, Greek

PROFESSIONAL EXPERIENCE

Senior Lead XR Developer   **July 2021 – Present**

ORamaVR SA

- Leading the development of 4 VR medical training simulations in Unity, contributing to code development and maintenance, managing task delegation, coordination with development team and clients.
- Serving as a core developer for 6 untethered VR medical simulations in Unity, focusing on simulation design, multiplayer integration, interactive gamified UX solutions and optimizations ensuring stable performance at 72 FPS on over 5 commercially available XR HMDs.
- Maintained code and developed new features in the MAGES SDK in both Unity and Unreal Engine 4, responsible for analytics, action prototypes, cooperative play, interactive and gamified solutions.

Software Engineer   **Jan 2019 – Mar 2021**

Telemetrics System Measurements

- Developed desktop applications for electrical/electronic measurement systems using **C#/.NET, Python.**
- Designed and implemented user interfaces and back-end logic for real-time data acquisition and visualization.
- Collaborated with CEO to gather requirements and presented solutions to technical teams

SKILLS

- **Programming & Systems:** C, C#, C++, Python, JavaScript, .NET, OpenGL, Vulkan, multithreading, performance optimization, CI/CD, Git/GitHub, Java, HTML, CSS, Figma, R
- **Engines & XR:** Unity, Unreal Engine, MAGES SDK, OpenXR, Oculus SDK, Vive Trackers, Ultimate Trackers
- **Graphics & Rendering:** Shader development (URP), GPU profiling & debugging (RenderDoc, PIX, Unreal Insights)

PROJECTS AND PUBLICATIONS

VR Isle Academy: A VR Digital Twin Approach for Robotic Surgical Skill Development (Published at CGI2024)

- Developed a portable, device-agnostic VR training simulator for robotic surgery, emphasizing cost-effectiveness and reducing the learning curve, with integrated hand and foot tracking to enhance realism and interactivity.
- Enabled real-time and offline error tracking for performance monitoring, demonstrating significant reductions in user error rates over multiple sessions. Paper Link

Hellas Logo Quiz

- Developed and published a Unity mobile quiz game on Google Play, challenging players to identify Greek brands across multiple categories. Features stage unlocking, memory training, and progressive difficulty. Google Play

Additional projects and publications available on my portfolio site

EDUCATION

Hellenic Open University, PhD in Computer Graphics   **July 2024 – Present**

Developing an AI-driven VR training environment that adapts to users' skill levels in real time, enabling collaborative, competitive, and realistic multi-user learning experiences.

University Of Western Macedonia, MS in Digital Games and Multimedia Applications   **Sep 2022 – Mar 2024**

Thesis: JARVRIKS: Developed a multithreaded full-body VR IK system in Unity using Vive XR Elite and Ultimate Trackers. Implemented C# Graphics Jobs, runtime calibration, and a VR IK Editor for real-time effector manipulation. Created three demos: a Superhot clone (upper body), a Beat Saber clone (upper body), and a soccer game (lower body). (Video)

University of Crete, BS in Computer Science   **April 2015 – Sep 2022**

- Thesis: Unreal Engine 4 Survival Horror Game, presentation of personal idea and game scenario to a supervising professor Files
- Developed the original Super Mario Bros with my team in C++ using Allegro5 Video