

## Personal Info

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Nationality

Greek

Date of birth

19/11/1994

## Links

[LinkedIn](#)

## Skills

- Unity 3D / C# (HDRP, URP, XR Interaction)
- VR/AR development (Meta Quest, Valve Index, OpenXR, Meta XR SDKs)
- Game Development
- Multiplayer networking (Netcode for GameObjects)
- Multithreaded physics & gameplay systems
- ML-Agents & Generative-AI pipelines
- ONNX, NNAPI, TensorFlowLite, Sentis
- Cesium 3D Tiles & Geospatial data
- C++, Python tooling, Git, CI/CD
- Mobile Optimization: GLES, Vulkan, Android NDK
- Data Visualization

# Angelos-Ioannis Katsampekis

Unity developer and research engineer

**Unity Game Developer & XR Research Engineer** with a proven track record delivering VR/AR and machine learning solutions for **Samsung** and **Coca-Cola**. Over 3 years of hands-on experience creating interactive VR/AR experiences, multiplayer gameplay systems, advanced physics simulations, and geospatial applications. Skilled in leveraging machine learning to build adaptive gameplay mechanics and simulations, with strong expertise in XR development, performance optimization, and cross-platform deployment. Proficient in **C#/Unity**, **C++**, and **Python**, with a history of close collaboration with engineering, art, and data science teams to deliver innovative, high-impact solutions.

## Work Experience

**Research Assistant, CERTH - Center for Research & Technology, Hellas, Thessaloniki**

2022 - 2025

### *Samsung Electronics - Avatar Body Capture (Unity)*

- **Prototyped** a mobile-ready **VR avatar-tracking** solution for Samsung, developed in close collaboration with their R&D teams to achieve real-time full-body motion prediction on mobile devices.
- **Integrated** multiple AI-inference back-ends in Unity alongside Unity's **Sentis**.
- **Built** an in-app **benchmarking** framework to compare model variants and inference engines under identical runtime conditions, streamlining internal evaluation.

### *Drone & Missile Simulator (Unity)*

- **Designed** and built the entire **simulator** end-to-end, from core architecture to UX.
- **Developed** and optimized a custom real-time, multithreaded **aerodynamic solver** with per-vertex force computation for accurate flight simulation.
- **Trained** autonomous drones with **Unity ML-Agents** to navigate dense forest environments.
- **Logged** missile-launch telemetry generating labeled datasets for **AI targeting research**.

### *Coca-Cola - CCH: Software Development Service*

- **Designed** and implemented machine learning **algorithms** for Coca-Cola, working alongside their data science team to support inventory optimization research.

### *Palimpsisto - 3D Geospatial Platform (Unity)*

- **Developed** an interactive **geospatial platform** for the Archaeological Museum of Kythnos, funded by the Greek government.
- **Integrated Cesium** to stream photogrammetry scans as 3D tiles from a Geospatial Database.
- **Connected** an **AI-Assistant** for in-platform interaction.
- **Linked** live museum findings **metadata** allowing curators to update exhibits.

### *5G VR Automotive Tour (Unity Multiplayer)*

- **Developed** a **VR Multiplayer** app in Unity that receives a 360-degree video stream over 5G, applies face anonymization on the fly and reports networking metrics.

### *VirTourArt Platform (EU Horizon, Unity SDK)*

- **Delivered** AR/VR rendering & multimodal interaction modules, localization & 3D reconstruction and packaged the subsystems into an **SDK**.

### *ReEvaluate - AI-Driven VR Museum (EU Horizon, Unity)*

- **Developed** an immersive museum where **generative AI** creates themed textures and auto-places artifacts based on semantic descriptions.

### *EMBNOESIS - Intelligent NB-IoT sensors for the construction industry*

- **Developed** a Python **data-visualization tool** that converts live NB-IoT sensor streams into interactive dashboards for construction-site monitoring.

### **Software Developer, Pragma - IoT Solutions, Thessaloniki**

2024 - 2025

### *Samsung Electronics - Game Optimization*

- **Created** Python and C++ **tools** for Samsung to convert and package deep learning models for mobile AI runtimes, streamlining deployment on Android devices.
- **Benchmarked** mobile **games** with a custom graphics monitoring harness, capturing frame-time, thermal, and battery data to guide optimization in collaboration with Samsung's engineering team.

## Education

### **Physics, Aristotle University of Thessaloniki (BSc)**

2012 - 2020

### **Advanced Computer and Communication Systems, Aristotle University of Thessaloniki (MSc)**

2021 - 2025

**Data Science with Python, National and Kapodistrian University of  
Athens (Certificate)**

2020 - 2021