

UNITY XR ENGINEER

BRIDGING ART AND ENGINEERING

LOÏCK RIVEMALE

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EXPERIENCE

8K AR Video Platform - Unity XR Engineer (NDA client)

December 2025 – Present

- Developed a custom video encoding/decoding pipeline to compress 8K source content into a 4K-compatible mobile delivery format.
- Built a Unity Android AR application for AR glasses, with a companion updater app, custom media processing tools, and backend content delivery system.
- Owned the technical architecture, development, maintenance, deployment, and client-facing delivery across the project.

RETiníZE, Belfast, UK - Unity XR Engineer

November 2020 – March 2025

Core member of the engineering team on Animotive, a VR multiplayer virtual production and animation platform, from pre-release development through commercial launch and post-release support.

- Developed a GPU-based, collider-less raycast system performing thousands of submesh-precision ray tests in a single draw call, replacing per-ray CPU physics queries.
- Wrote all the in-house custom shaders and render features while optimizing the rendering pipeline for complex VR scenes.
- Built and maintained a complete UI toolkit for VR.
- Took part in evaluating and integrating full-body tracking systems, including Vive trackers and Xsens.

Airbus Defense & Space, Toulouse, France - Unity VR developer

July 2017 – June 2020

Core member of Airbus Group's internal VR visualizer (**DragonFly**) development team from prototyping to post-release.

- Built a procedural 3D shape generation library and two TCP interfaces in C# and Java to connect DragonFly with external software.
- Developed a double-precision solar system simulation and satellite telemetry visualizer to support DragonFly's adoption by Toulouse Mission Control center.
- Managed client relationships, roadmaps, and demos for projects integrating DragonFly into other teams.

VisioPM, Toulouse, France - Unity C# developer intern

April 2016 – August 2016

- Built a proof of concept for a Unity-based autostereoscopic rendering engine.

XNoise – Free open-source side project

2025

- Ported LibNoise into a node-based Unity noise generation tool with CPU/GPU execution and planar, spherical, and cylindrical map export.

STUDIES

Epitech, France Master's degree in software engineering

2013 – 2018

Beijing Jiaotong university, Beijing, China - Computer science

2016 – 2017

PRIMARY SKILLS

- C#
- Shaderlab (HLSL)
- Shader graph
- Unity (URP, HDRP, custom RP)
- Git
- Photon Bolt
- Virtual reality
- Augmented reality
- Mathematics
- GPU acceleration
- Render features
- Editor tooling

WORKING KNOWLEDGE

- C
- C++
- Java
- Javascript
- Blender
- Photoshop/Photopea
- Gaea
- Linux
- TCP/UDP networking
- Protocol buffer
- WebGL
- SQL
- WPF

LANGUAGES

English : Professional fluency

French : Native