

AUBRY Mathias

Software Development Engineer

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ABOUT

Engineering graduate from ESIEE Paris's Computer Science and Applications program, I am looking for a permanent position in 3D applied to medical imaging, video games, visual effects for film, or simulation.

PROFESSIONAL EXPERIENCE

- Apprentice — ESIEE Paris / KNDS France Training**09/24 – 09/27
- Contributed to the development, evolution, and maintenance of a proprietary immersive 3D and XR training solution built with Unity (C#).
 - Developed a real-time multimodal AI pipeline integrating computer vision (OpenCV), speech recognition (Vosk), local LLM/VLM inference (Mistral), and text-to-speech (Piper TTS).
 - Developed a local AI chatbot featuring a RAG system, context management, and conversation history.
- Intern — ESIEE Paris / Service Informatique Malakoff Humanis**07/23 – 08/23
- Developed an automated data-merging methodology (Excel).
 - Method adopted by the “Asset Management” team.
 - Worked with databases to automate tasks (Excel).

EDUCATION

- Engineering Degree in Computer Science and Applications (Work-Study)**2024–2027
- ESIEE Paris & KNDS France Training
- Unity 3D & VR | OpenGL | C++ | C# | C | Git | Python
- Preparatory Program**2022–2024
- ESIEE Paris
- Maths | Physics | Electronics | Computer Science (Java, C)
- High School Diploma, Advanced Maths & Physics track — With Honors, European Section**2022
- Lycée Gustave Monod | Enghien-Les-Bains 95880

PROJECTS

- Full project details on my portfolio: [AubryMathias.fr](#)
- Computer Graphics — C++ / OpenGL 3.3 / GLSL (2026)**
- Real-time 3D rendering engine built in a pair: OBJ model loading, Phong/Blinn-Phong shading, Fresnel-Schlick, off-screen rendering (FBO), 8 post-processing effects, and a real-time ImGui interface.
- Head In the Cloud — Unity3D / C# / VR (2025–2026)**
- Multi-environment VR experience on Meta Quest 2: central hub with portals, a shooting mini-game, a horror maze, and an escape room. Custom shaders built with ShaderGraph.
- Hold’Em — Python / Arcade (2025)**
- 2D game developed with a team of 5 during a 2.5-day GameJam on the theme “You are not the center of the story.” The player controls the hero's enemies to slow them down. Menu, cutscenes, and 3 playable scenes built end to end.
- Where The Darkness Took Them — Unity3D / C# (2023–2025)**
- Exploration and horror game developed over a year and a half. Cutscene system, custom shaders (fog, ray-marching), and optimization via occlusion culling.

SKILLS & LANGUAGES

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|--------------|-----------------------|-----------|--------------------------------|-----------------------------------|---------------|
| ▪ Unity (C#) | ▪ Unreal Engine (C++) | --- | ▪ English C1 — TOEIC (975/990) | ▪ French C2 — Certificat Voltaire | |
| ▪ Python | ▪ Ollama | ▪ Git | --- | ▪ Spanish B1 | ▪ Japanese A1 |
| ▪ GIMP | ▪ Audacity | ▪ Blender | --- | | |

HOBBIES & EXTRACURRICULAR

- Self-taught **learning** : guitar, singing, piano
- ESIEE Paris Music Club: event and concert organization
- Photography
- Competitive archery since 2018
- Strength training