Arthur PINEL

Mec GOATesque

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Open to international positions
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Profile

mec **vraimment** *stylé* mais qui est un peu gentil aussi car il préfère les **chips** par contre le feur.

Skills

Core Systems	**C++ (Modern 17/20)**, Engine Architecture (**ECS, Scene Graph**), **Memory Management**, Entity Pooling, **Multithreading**.
Maths	**Linear Algebra** (Vectors, Matrices, **Quaternions**), Trigonometry, **Geometry for Collisions**.
Networking	Real-time **Client/Server architecture**, Packet Serialization/Compression, **Movement Prediction** (Kalman Filter).
Graphics	**OpenGL**, **Rendering Pipeline**, Scene Graph management, 3D Real-time Visualization.
Tools	Git, **CMake**, **Visual Studio**, Linux, Unity.
Languages	French (Native), Spanish (Native), **English (TOEIC B2 - Professional working proficiency)**.

Experience

2025–Present — **Software Engineer**, *Dassault Systèmes*, Apprentice
- Actively maintaining and optimizing a high-performance 3D scene graph using C++.
- Refactoring and modernizing legacy codebases to C++17/20 standards.
- Building internal debugging tools to improve engine development workflow.
- Implementing Unit Tests to ensure engine stability and prevent regressions in core systems.

2024–2025 — **Game Programmer**, *WebGames*, Freelance
- Enhanced a proprietary game engine by implementing core systems and gameplay mechanics.
- Optimized spatial partitioning using a QuadTree for efficient collision detection.
- Developed behavioral AI systems to simulate player movement and decision-making.

2024 — **Network Programmer**, *WebGames*, Internship
- Architected a multiplayer system using an authoritative server model.
- Implemented custom serialization and data compression for network packets.
- Developed smooth client-side synchronization and movement prediction using a Kalman Filter.

Projects

2025 — **BrotaFEUR - 2D RogueLike Game Engine**, *C++, SFML, CMake*
- Developed a custom entity system, managing rendering, and collision engine.
- Integrated a multi-threaded architecture and a CLI-based logging/debugging system

2025 — **FEURnite – Battle Royale**, *Unity, C#, Photon*
- Served as Lead Developer and Architect for a multiplayer Battle Royale project.
- Implemented network synchronization for complex inventory and combat systems.

Education

2025–2028 — **ENSIIE**, *Master of Science in Computer Engineering*, France
Diplôme d'ingénieur - Game Development Club Member, Game Jam Participant : CStudio Game Jam, UNIJAM

2022–2025 — **Université Paris-Saclay**, *Bachelor of Science in Computer Science*, France
BUT Informatique - Specialization: Application Development.