

DAVID NICUSOR CAPMARE.

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Date of birth: 23/03/2003 • Nationality: Romanian, Belgian

SUMMARY

Currently a game development student at DAE in Kortrijk. I am passionate about game engines, fluid simulations, combat systems and concurrency.

WORK EXPERIENCE

Internship – Game Engine Developer – TaleWorlds Entertainment, September 2026 – January 2027

- Working on custom game engine development as part of the engine team.
- Applying modern C++ practices to engine-level systems.
- Collaborating with the engine team on core architecture and performance.

Financial Software Developer – vFinance, 2026 – 2026 (Contract)

Developing financial software with C++20, Qt (Widgets + QML), building reusable UI components, optimizing and profiling software, implementing multithreading workflows, and maintaining unit tests.

Mentorship – [AuTArG Studios \(Project Nomads\)](#) – Remote, 2024 – 2025

Learning from a mentor while developing AI systems and custom magic systems for Project Nomads. Focused on game design architecture and technical implementation of complex gameplay systems.

SIDE PROJECTS

Fluid Simulation – Real-time fluid dynamics simulation in [Unreal Engine](#) + [Real-Time fluid dynamics with CUDA](#)

[LocklessLib](#) – Header-only lock-free SPSC/MPSC/MPMC ring buffers in C++23

[Unreal Engine Custom Magic Sense](#) – Advanced magic system implementation in Unreal

[Modern Vulkan Rasterizer](#) – Custom rasterization pipeline using modern Vulkan

[TurnBased RPG Template](#) – Complete RPG framework with turn-based combat

[DirectX12 Renderer](#) – Low-level graphics rendering engine using DirectX 12 with modern C++

PROJECTS & GAME JAMS

[Happy Volcano](#) – C++ Gameplay Programmer (End of Year University Project, 2025-2026)

- Designed and implemented core gameplay mechanics
- Profiled and optimized real-time performance
- Integrated audio and visual systems

Kidults – Lead Developer / Gameplay Programmer

- Coded procedural movement in Unreal Engine
- Worked with Chaos Physics System for cloth simulation
- Designed gameplay loop and AI NPC systems with vertex animation and multiple states
- Created world-building tools to assist artists
- Programmed UI systems and 2-controller local co-op setup
- Mentored other programmers on Unreal Engine

SoulStorm – Lead Developer (1 Week Game Jam)

- Designed and programmed main game mechanics: wall run, wall climb, wall jump
- Implemented sound and music
- Communicated and collaborated with sound artists, animators, and level designers
- Guided 2nd programmer and assigned team tasks

The Librarian – Lead Developer (1 Month Game Jam)

- Taught students Unreal Engine environment and gameplay mechanics implementation
- Guided development of animations, point-and-click movement, and puzzle mechanics
- Communicated with UI/UX artists and game designers for optimal development
- Managed tasks for UI/UX designers, 2 programmers, and 3D artists
- Implemented sound systems

EDUCATION

Game Development – HOWEST Digital Arts and Entertainment, Belgium, 2023-2026

SKILLS

PROGRAMMING LANGUAGES:	C++20/26, Unreal Engine, C/Arduino, Python, C#
GRAPHICS & FRAMEWORKS:	Vulkan, DirectX9/11/12, CUDA, CMake, SimdJSON, JSONCpp, NlohmannJSON
TOOLS & TECHNOLOGIES:	Unreal Engine 5, Jira, Git, SIMD optimization, Lock-free programming

LANGUAGES

Romanian: Native • Spanish: Native • English: Advanced • Dutch: Advanced