



# GUUS KEMPERMAN

## Engine Programmer



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<https://guuskemperman.github.io>

## PROFILE

Student at Breda University of Applied Sciences in Creative Media and Game Technologies. Skilled in Engine and Tools programming, with strong experience in custom engines. Passionate about programming and very proficient in C++. Additional experience with Unreal, AI and gameplay programming.

## RECENT PROJECTS

### Coral Engine - C++

2023 - 2024

Engine & Tools Programmer

- Designed and maintained the core architecture, from conception until release.
- Developed key systems like runtime reflection, visual scripting, serialization, prefab management, a level editor, asset management, event handling, and contributed to a 2D physics system.
- Led a team of 5 programmers, managed task distribution, and enhanced the engine for production.
- Integrated GitHub Actions for CI/CD and built a custom unit test framework.
- Contributed to cross-platform support, including support for PS5.
- Created editor front-end through ImGui
- Used the engine to develop Lichgate,. Implemented Utility AI for state-based behavior. Contributed to AI navigation and procedural world generation.

### Turbo Tails - Unreal

2022

Gameplay & Tools Programmer

- Developed AI, local multiplayer systems, UI, and core gameplay mechanics.
- Collaborated in a team of 13 using Scrum methodology.
- Contributed to an award-winning game (Best YI Game 2023 & Best Tech Award).

### 2D Raytracer - C++, OpenGL

2022

Gameplay & Tools Programmer

- Developed a 2D GPU raytraced survival game (Spider Sling) with advanced optimizations in physics and graphics.
- Implemented multi-threading, cache optimizations, a BVH and screen-space acceleration structures for efficient raytracing.
- Solo project, handling tens of thousands of objects with real-time reflections.

## EDUCATION

### Bachelor of Creative Media & Game Technology

BUAS

2021 - 2026

### VWO - TTO - NT/NG

OSG Willem Blaeu

2016 - 2022

### IB-Diploma AB

OSG Willem Blaeu

2016-2022

## EXPERTISE

- C++
- Unreal Engine
- Profiling & Optimising
- Engine Development
- Tools Development
- Cross-platform development
- DOD & ECS Design
- Github
- Perforce
- CI/CD
- Teamwork
- Communication
- Fast learner

## LANGUAGE

- English - Native
- Dutch - Native