André Monteiro

andremgmonteiro01@gmail.com (+351) 933 888 090 Barcelos, Braga

mastardy.github.io github.com/Mastardy

Profile

I'm a curious and dedicated programmer who thrives on understanding systems from the ground up. Fascinated by low-level development and the art of tool creation. I enjoy turning complex problems into elegant solutions with hands-on inventive approaches.

Professional Experience

Software Engineer 10/2023 – 09/2025
Shadow Profile, LDA. Famalicão, Portugal

- Designed and developed high-performance, cross-platform interactive applications using Unity, Unreal Engine and Three.js;
- Engineered real-time, distributed systems for online experiences, leveraging REST APIs, Databases and Sockets to ensure low-latency, scalable interactions for thousands of users;
- Designed and implemented AR/VR applications for visualization in the Construction Area;
- Collaborated in an agile team to deliver complex projects and align technical solutions with client needs;
- Integrated CI/CD pipelines to streamline build and deployment processes, enhancing development efficiency;
- Designed and developed in-house tools to improve team efficiency and reduce manual overhead when developing and dealing with assets.

Education

M.Eng. Game Development 10/2022 – Present
Instituto Politécnico do Cávado e do Ave Barcelos, Portugal

B.D. Game Design 09/2019 – 07/2022
Instituto Politécnico de Bragança Mirandela, Portugal

Skills

Programming Languages
C++, C#, Javascript, Python

Tools
Git, Unity, Unreal, Three.js, Vulkan, OpenGL, Qt

Projects

PlonqCraft - Voxel Ray Tracer 09/2025 – Present

PlonqCraft is a real-time voxel ray tracer built with OpenGL and compute shaders.

- Implemented efficient voxel traversal and chunk-based rendering using compute shaders.
- Developed a physically-inspired lighting system with directional light and hard shadows.
- Optimized rendering pipeline for real-time performance and scalability to larger voxel worlds.

Personal STL (WSTL) 03/2023 – 09/2023

WSTL is a custom Standard Template Library written by myself using modern C++. It's purpose is to implement better solutions for my Projects.

- Implemented Data Structures, Smart Pointers and Allocators optimized for Games and Simulations.

Toy Game Engine (WCGE) 09/2022 – 11/2022

WCGE is a game engine being written by myself using OpenGL and modern C++

- Implemented a Math Library optimized for Games and abstracted OpenGL into a much easier to use Graphics Library
- Implemented WSTL, a standard template library with the necessary Data Structures, Smart Pointers and Allocators optimized for game development

Caelum - Lead Programmer (Team of 10) 03/2022 – 07/2022

Caelum is a survival game where players explore a world of floating islands.

- Designed and Implemented core systems: Inventory, Crafting, Farming and Player Movement
- Developed online multiplayer functionality and advanced AI agents for NPC behaviors.
- Conducted code reviews to ensure code quality and team collaboration.