



Pedro Pereira

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Senior Software Developer – Computer Graphics, Interactive Applications and Games

In 1994, after my grandparents gave me an original Game Boy and I became instantly hooked, I decided that when I grew up I'd only work on things that sparked that same sense of wonder. I've been creating games and other interactive applications since I started programming in 2009. Since then, I've been lucky to contribute to some truly exciting projects in every job I've had. Now, I'm looking forward to the next awesome challenge – somewhere I can make a real impact, working alongside talented and passionate people who once shared the same dream I did.

WORK EXPERIENCE



<https://getchaotic.com>

Lead Graphics & Gameplay Engineer | Jan 2024 – ongoing
Graphics Engineer | Jan 2023 – Dec 2023 (part-time)

- Building a high-performance 3D game engine and editor in Rust. Deploying to WebAssembly and WebGL2 for an online web-based game platform, delivering console-quality visuals and near-native performance
- Leading core engine architecture across graphics, gameplay systems, real-time lighting, animation, physics, and overall systems design
- Designing and implementing seamless interoperability between Rust (game logic) and React/TypeScript (web UI), enabling robust bidirectional communication and real-time control of in-game systems using web technologies
- Contributing to the broader platform architecture, including gameplay recording and social sharing, multiplayer infrastructure, auto-scaling game servers via Kubernetes, and in-game purchase integration with payment providers
- Developing multiple 3D multiplayer browser games using the engine and partnering with external studios to support the development and successful delivery of their own titles



Unreal Engine 5 Programmer | Oct 2021 – Dec 2023

- Rebuilt the Viz Engine ↔ Unreal Engine integration, enabling Unreal's real-time rendering within Vizrt's broadcast-grade graphics platform for virtual sets and AR/VR workflows
- Enabled texture sharing and compositing for high-quality virtual graphics and real-time payout in live broadcasts
- Integrated Reality Connect to enhance presenter immersion with AI-driven depth, shadows, and reflections in virtual studio environments
- Delivered a production-ready, streamlined workflow tailored to broadcast operations, improving control and execution of complex live and augmented graphics



Vision Tech Lead | May 2019 – Apr 2021

Graphics Programmer | Feb 2017 – Apr 2019

- Developed an in-house real-time rendering engine and graphical editor for TV broadcasts and Unreal Engine integrations for virtual sets and AR/VR workflows
- Led the development of custom broadcast solutions for new markets, including Virtual Stadiums, Virtual Crowds, and Virtual Ads for live sports

EDUCATION



MSc in Information Systems and Computer Engineering

Specialization in Intelligent Systems and Games

Dissertation “Modelling Progression in Video Games”

Sep 2013 – Jun 2016 | Grade 16.8 / 20



BSc in Computer Science and Engineering

Sep 2009 – Jul 2013 | Grade 14.0 / 20

PERSONAL INTERESTS

Coding

“Stand Alone” - Unreal Engine 5 Core Developer

Massive multiplayer strategy game inspired by Risk Reforged (Warcraft 3 mod), rebuilt from scratch in **Unreal Engine 5**.

- Designing and implementing core architecture, networking, and gameplay systems
- Developing a lockstep deterministic RTS networking model, where only player inputs/commands are transmitted and executed in sync across clients
- Building a custom ECS-style architecture for gameplay entities (intentionally avoiding standard AActor usage for the simulation layer)
- Separating simulation and rendering update loops to preserve determinism while maintaining smooth visuals
- Continuously evolving the project from a legacy mod into a scalable, standalone multiplayer title with strong emphasis on maintainability and long-term architecture

Music

Active performer and former vice-president of **anTUNiA**

Tuna de Ciências e Tecnologia da Universidade Nova de Lisboa

Former member of **emCANTUS**

Adult Choir of the Associação Coral de Odivelas

Games

Recently found a new passion for sim-racing, board games and tabletop RPGs.

Started playing Dungeons & Dragons and Pathfinder, as well as painting my own miniatures and terrains.

Sports

Former practitioner of Karate, Swimming and Krav Maga. Looking forward to training Boxing.