

# Pedro Ferreira

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## TECHNICAL SKILLS

**Languages:** C++, C#, Dart, GLSL | **Engines:** Unity, Unreal Engine, Flame, Proprietary Engines  
**Graphics:** OpenGL, Shader Programming, Real-time Rendering | **Tools:** Git, Visual Studio, Performance Profiling

## EDUCATION

**Bachelor's degree in Games and Multimedia** | Polytechnic of Leiria | 2021–2025

## PROJECTS

**Custom 2D Game Engine** | C++, OpenGL, GLSL | 09/2024–02/2025

Built game engine from scratch achieving 60 FPS at 1080p. Implemented ECS architecture, batch rendering, reducing draw calls by 80%.

**Xenon Clone – Arcade Shooter** | C++, OpenGL, Custom Engine | 09/2024–02/2025

Developed complete shooter with 3 enemy AI types and 4 weapon variants. Implemented object pooling reducing memory allocations by 90% and hierarchical state machines.

**Mobile 2D Shooter** | Dart, Flame Engine | 01/2025–02/2025

Created wave-based mobile shooter with 20-wave progression system and 5 power-up types. Optimized for 60 FPS on mid-range Android using object pooling for 500+ concurrent entities.

**Freedom's Path – Stealth Game** | Unity, C# | 02/2023–09/2023

Developed stealth game released on itch.io with 500+ downloads. Implemented vision cone detection with raycasting, dynamic audio propagation, state-based AI behaviors, and collectible system with 4 different endings related with collectibles.

## WORK EXPERIENCE

**Game Programmer** | Fujitsu | 02/2025–07/2025

Developed Unity-based 3D gamification tools for employee training. Implemented interactive tutorials, progress tracking, and WebGL optimization, achieving 30 FPS browser performance.

**Cashier** | Continente (MC) | 09/2023–04/2025

Part-time retail position during studies.