

# Valentina Liberona Zúñiga

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## ABOUT ME

**Unity Game Developer** with over 4 years of experience creating immersive gameplay systems and high-performance mobile and VR games. Skilled in **C#, shader programming (HLSL, Shader Graph)**, and **performance optimization** for resource-constrained platforms like **iOS, Android, and Meta Quest**. Proficient in gameplay systems (AI, camera, player input), 3D modeling, and visual effects. Passionate about crafting engaging experiences through technical excellence, strong problem-solving, and iterative game design.

## Experience

- Unity Developer, Pignus** Jan 2023 – Present
- Developed and optimized **gameplay mechanics** for mobile and **VR** platforms using **Unity** and **C#**, targeting iOS, Android, and Meta Quest.
  - Focused on **performance optimization**, including **lightmap baking, reflection probes, and HLSL shaders** for improved frame rates.
  - Built and maintained modular **gameplay systems** (camera, input, AI, player control).
  - Specialized in **3D asset creation and optimization** using **Blender** and **Substance Painter**, targeting stylized and high-fidelity assets.
  - Integrated **VFX, post-processing, and UI animations** to ensure polished visual feedback and performance.
- Frontend Developer, Capitalizarme** May 2022 – Mar 2023
- Developed frontend interfaces using **React** and **TypeScript**, applying best practices in game UI/UX design.
  - Collaborated with designers and backend engineers to develop an interactive real estate product and a school system.
- Unity Developer, University of Oxford** Mar 2022 – May 2022
- Developed shaders for **AmblyopiaVR**, integrating clinical logic into engaging **Unity** gameplay.
  - Ported MATLAB scientific code into **HLSL shaders** to accelerate stereo vision training in real-time.
- Unity Developer & UI/UX Designer, University of Chile** Feb 2020 – Jun 2021
- Designed and implemented an immersive **VR simulation** in **Unity** using **C#**, featuring AI-driven workers and interactive environments.
  - Modeled and animated 3D characters and objects using **Blender** and Unity's Animator.
  - Created visual effects with **Shader Graph** to enhance realism and engagement.
  - Optimized lighting, occlusion, and batching for smooth experiences on **Meta Quest**.
  - Prototyped AI-based NPC interactions using character behavior trees and user input.
- Full-Stack Developer, Pulso Escolar** Jan 2019 – Dec 2019
- Developed an educational analytics dashboard using **Vue**.
  - Built dynamic visualizations for time-series, filters, and responsive updates across multi-school enrollment data.

## Education

**Bachelor of Engineering in Computer Science**, University of Chile  
Completed coursework in 2018 – Degree awarded in 2021 with **Highest Honors**

## Skills

- Game Development:** Unity, C#, Object-Oriented Programming, Shader Graph, HLSL
- Optimization:** Lightmapping, Occlusion Culling, Batching, Mobile Performance
- 3D Art & VFX:** Blender, Substance Painter, VFX, Post-Processing, Lighting
- Animation:** Unity Animator, Inverse Kinematics, Rigging
- UX/UI:** Game UI Systems, UI Animation, Interactive Feedback
- Languages:** Spanish (native). English (fluent)