

Carlos Brito

Website digitaldivergence.io

WORK

Lead R&D Engineer / Feb 2023 - May 2025

Swoove

Assembled and led an R&D team for the application of machine learning techniques to 3D skeletal animation. Implemented custom voice filters using DSP techniques. Worked on implementing and enhancing UI/UX.

C# Unity Python ML

Unity Engineer / May 2022 - Dec 2022

Soba

Worked in the Soba mobile game engine. Focus on UI, backend communication, and the visual scripting system.

C# Unity

R&D Engineer / Nov 2019 - Dec 2021

DTx – Digital Transformation CoLab

Worked in distinct projects as team leader, developer and architect involving AR/MR/VR as well as hardware/software computer vision solutions for industry.

C# Unity AR VR MR C++ Halcon OpenCV
Linux

Guest Lecturer / Jan 2018 – Feb 2023

Universidade do Minho

Assistant to the undergraduate course on Computer Graphics, a 3rd year subject within the Bachelor's in Informatics Engineering.

Teaching C++ OpenGL GLSL

Research Fellow / Jun 2018 - Feb 2019

CCG – Center for Computer Graphics

Application development in Unity.

Unity MR UI/UX Motion capture Animation

Researcher / Jun 2017 - Sep 2017

HASLab

Performance evaluation and optimisation in Haskell.

Haskell

SKILLS

Programming Languages: C++, C, C#, Java, Python, Haskell, Lua, GLSL, TouchDesigner

3D Engines: Unity, Unreal, Godot

Libraries: OpenCV, OpenGL, Dear ImGui, Halcon

EDUCATION

Master's degree in Informatics Engineering

Universidade do Minho, Portugal

2014 – 2017

Specialisation in Computer Graphics and Formal Methods in Software Engineering

Bachelor's degree in Informatics Engineering

Universidade do Minho, Portugal

2011 – 2014

Project Highlights

- **Unfinished Robot Game** – Personal
A 3rd person shooting game developed for the Godot Wild Jam.
- **MACC Virtual Tour** – DTx CoLab
Virtual Reality tour to the upcoming Portuguese super-computer Deucalion. Implemented in Unreal Engine 4.
- **EdAR** – DTx CoLab
The EdAR project is an extensible, Unity-based, framework for the development of custom AR experiences for education.
- **Bosch AOI** – DTx CoLab
An automated optical inspection software/hardware solution integrated in the Bosch production lines in Braga for quality assurance and data-collection.
- **Heritage Care** – CCG
A HoloLens application for assisting building inspectors in performing preventive maintenance operations on heritage buildings.
- **Virtual Maestro** – CCG
A brief project that consisted in capturing a conductor's body movements and using them to animate a virtual avatar. The avatar was displayed before a musical ensemble and a live audience. Implemented in Unity.

Publications

Towards Music-Driven Procedural Animation

Brito, C., Ramires, A.

2019 International Conference on Graphics and Interaction (ICGI)

BIM Mixed Reality Tool for the Inspection of Heritage Buildings

Brito, C., Alves, N., Magalhães, L., and Guevara, M.

ISPRS Ann. Photogramm. Remote Sens. Spatial Inf. Sci., IV-2/W6, 25–29