ALEXANDRE CHÍCHARO

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My name is **Alexandre Chícharo** and I have a great passion for videogames. I am currently working as a **Render Programmer** at **Saber Interactive Porto** on **AAA** projects. I have **2 years** of experience in the Game Industry and I'm proficient in **C++** and **Unreal Engine 5**. I'm passionate about creating immersive gaming experiences and enjoy working on challenging projects that push the boundaries of what's possible. I'm always looking to learn new things and collaborate with other talented developers.

Skills

Programming Languages

C++	C#
Java	Python
C	Javascript
Julia	

Gamedev

Unreal Engine 5
Unity 3D
Blender
WinPix
RenderDoc

Experience

Render Programmer - Saber Interactive Porto
December 2022 - Present

As a **Render Programmer** at **Saber Interactive Porto**, I work on big multi-studio **AAA** projects that require a high level of expertise in **graphics programming** using **C++**. The projects I work on are at a level where **Unreal Engine 5** is not enough, so we need to make changes to the engine to achieve more performance, better fidelity, or better quality of life for other developers. My work is critical to ensuring that the games developed by **Saber Interactive Porto** are of the highest quality and meet the expectations of gamers worldwide.

Junior Unity Developer - Kool Games
March 2022 - September 2022

During my time at Kool Games, I developed hypercasual mobile games in **Unity 3D** in **C#**.
I worked in small teams of three people, one developer, one artist, and one designer. Working as a solo programmer, I was responsible for everything from designing the architecture, to implementing the mechanics, and integrating the art. The majority of the games were puzzle games, and I had to develop **procedural level generation** for most of them.
We work in tight prototyping schedules so we were working on a new game every week, this allowed me to get experience with a lot of different mechanics and situations.

Internship - National Institute of Informatics (NII), Tokyo
October 2019 - April 2020

I interned for 6 months and worked on the Unmanned Aircraft Systems Traffic Management (UTM) project for JAXA. Developed Drone Path Planning tools over the Tokyo Skyline using an Octree partition. The Octree partition, and path planning tools were developed in **Java**.
At the same time, I developed a **Unity 3D** Visualizing tool that allowed us to see and navigate the Octree partition displaying approximately 220000 buildings in real-time. I learn a lot about graphical optimizations including GPU instancing, batching, and mesh combination with a voxel renderer.
The work I did there directly supported a P.h.D student's research and I ended up co-authoring the paper ***Multi-Agent Path Finding in Unmanned Aircraft System Traffic Management With Scheduling and Speed Variation*** published to **IEEE Intelligent Transportation Systems Magazine**

Education

Masters in Computer Science Engineering
Instituto Superior Técnico
September 2018 - November 2021

Specialized in Games but also doing courses in Intelligent Systems, Interaction and Visualization, and Software Engineering.
Graduated with a GPA of **17**

Favorite Projects:

- **CyberNoodles** in Computer Graphics for Games: Built a game engine and implemented Deferred Rendering, Lighting shaders, and Screen Space Ambient Occlusion(***SSAO***)
  OpenGL and **C++**
- **Pain 2 Win** in Game Design: 2D platformer rogue-like. For this game, I implemented the character movement, weapon system, melee/ deflect mechanic, moving platforms, and loot box vending machines.
  Unity and **C#**
- **Hybrid** in Game Development Methodology: Asymmetric 2 player Coop Stealth game. For this game, I implemented networking and the hacker view, including a command-line interface, security camera hacking, and hacking objects to distract guards.
  Unity3D and **C#**
- **VR Tetris** in Virtual Reality: Developed a Tetris game in 3D in VR. For this game, I implemented the tetromino spawner, line clearing, and a pickaxe.
  Unity3D and **C#**
- **ClusterTechRush** as a testbed game for my master thesis: 3D Topdown shoot'em up. For this game, I implemented Character movement, Two game modes, a flexible weapon system, procedural enemy spawning, procedural levels, teleporting between levels, Safety shield.
  Unreal Engine 4 and **C++**

Favorite Courses:

- Game Development Methodology: 18
- Game Design: 17
- Computer Graphics for Games: 19
- Virtual Reality: 19
- Artificial Intelligence in Games: 16
- Autonomous Agents and Multi-Agent Systems: 18
- Advanced Programming: 16
- Master Thesis (**Active vs Passive Flow Adjustment in Games**): 18

Degree in Computer Science Engineering
Faculdade de Ciências da Universidade de Lisboa
September 2015 - June 2018

Graduated with a GPA of **16**

Favorite Projects:
- **TornGes** in Construction of Software Systems: Chess Tournament Management software
  Java full-stack
- **PhotoShare** in Security and Dependability Photo sharing, secure,server-based, application
  Java
- **Mimar** Host Home for Children Management application
  MEAN stack

Favorite Courses:
- Introduction to Programming: 19
- Construction of Software Systems: 19
- Object-Oriented Development: 18
- Computer Networks: 18
- Principles of Programming: 18
- Distributed Systems: 17

Hobbies and Interests

I am very passionate about games I like playing in my free time, alone or with my friends, on PC, PS5, Steam Deck, Oculus Quest 2, mobile, or even tabletop, I play a little bit of everything and have over 850 games in my Steam Library. Besides playing I also like making them. I enjoy participating in game jams. I keep a list of Game design ideas and I'm always eager to learn more about game design and game development.

Has a computer science engineer technology is always a big part of my life. For that reason, I like being up to date on all the tech news. Be it about consoles, VR headsets, monitors, smartphones, electric vehicles, etc.

From my love of technology also comes a love for Drones. I have built my own FPV racing drone, and I'm training to be a good FPV Drone pilot.

Since I was in Japan I developed a deep appreciation for Japanese culture, especially for the food. Having difficulty finding good cheap ramen in Lisbon got me to dive into the rabbit hole of all the decisions that come with making a bowl of ramen. That journey made me into the ramen nerd I am today.

As for sports I have been bouldering for almost 2 years now, it's an amazing sport and a super cool way to exercise and to keep in shape. I have grown so much since I started by I still have so much to learn.

Last but not least, I love bubble tea. I could drink it every day I have recently figured out how to make it at home.