



## Filipe Lopes Pires

Immersive Experiences & Spatial Media

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## Curriculum Vitae

Lead engineer with proficiency in the delivery of interactive experiences and new media productions. I have a strong passion for computer graphics (CG) and extended reality (VR/AR/MR), virtual production (VP) and visual effects (VFX), artificial intelligence (AI), and volumetric / spatial video.

## Professional Experience

### Lead Immersive Engineer | 2024–Current

#### Dorier Group | Switzerland, Remote

Lead the technical execution of interactive experiences, immersive applications and custom software solutions for world renowned clients, with responsibilities covering system design and architecture, team leadership and project management, partner and client relationship building, budget negotiation, on-site technical support, cloud services and AI initiatives administration, software and hardware research and development, and more.

### XR Solutions Engineer | 2021–2024

#### Arcturus Studios | USA, Remote

Drove the development of complete immersive applications and technical solutions.

- Developed and refined plugins for Unreal and Unity, focusing on the optimization for real-time playback, implementation of VR support, writing of custom shaders, among other priorities, and targeting various graphics APIs such as DirectX, Vulkan and OpenGL
- Lead the gameplay development of an unannounced MR title for the Meta Quest and Vision Pro
- Executed R&D initiatives for volumetric playback in WebAR solutions like 8<sup>th</sup> Wall and Zappar, and Metaverse platforms such as Fortnite
- Provided technical support to clients and partners for projects such as Vertigo Game's "The 7<sup>th</sup> Guest", "The Fushimi Inari Experience", and more
- Worked closely with technical artists, software engineers and designers
- Applied internal software to process stereoscopic data streams for digital human performances

### Multimedia Software Engineer | 2020–2021

#### VR360 | Aveiro, Portugal

Designed and implemented a complete solution to capture, produce and playback volumetric video.

- Integrated hardware for the calibration and synchronization of multi-camera setups
- Developed a pipeline to capture and process video streams and textured mesh sequences
- Captured 360° media, and developed 3D virtual tours for clients
- Worked closely with filmmakers and visual effects artists

## **Software Engineer | 2017–2020**

### **Research Grants & Internships | Aveiro, Portugal**

Integrated research teams in parallel to my degree studies.

- Executed studies on immersive visualization of medical imaging at the Institute of Electronics Engineering and Telematics of Aveiro
- Produced promotional videos for the University of Aveiro's Institute of Telecommunications
- Developed an intelligent tool for detecting people through computer vision at Critical Software
- Automated networking hardware tests for Altice Labs

## **Education**

### **Master's Degree, Informatics Engineering | University of Aveiro**

#### **Aveiro, Portugal**

Completed my master's degree in software engineering, with a final grade of 18 out of 20.

- Took part in over 40 software development projects
- Acquired knowledge about diverse programming paradigms, data structures and the most used software design patterns
- Learned the fundamental concepts and work techniques regarding the fields of software design and architecture, web technologies and databases, artificial intelligence, distributed computation, networking and security, compilers, and operating systems

### **Extracurricular Courses, Multimedia | University of Aveiro**

#### **Aveiro, Portugal**

Attended 5 extracurricular courses in parallel to my bachelor's and master's degrees.

- Directed audiovisual productions and lead their post-production
- Developed desktop and mobile games, as well as virtual and augmented reality applications
- Learned the fundamentals of 3D modeling, texturing and printing
- Learned a number of creative tools such as Adobe Suite, Unity, Blender, 3DS Max, and more

## **Highlights**

- Producer and director of "Vulnerable", an award-winning short film
- Author of 5 published research papers and invited lecturer at the University of Aveiro
- Member of the XR4Europe and Euromersive associations, uniting the XR community in Europe
- Participant in technology and professional growth events such as Augmented World Expo, Immersive Tech Week, AI for Good Summit, Web Summit, Pixels Camp, and more
- Certified with English level C2, Cambridge Certificate in Advanced English
- Former volunteer at Portuguese Red Cross as a driver for the Social Emergency National Line with over 200 hours of service, certified with the First Aid European Course
- Former volunteer at the Art and Quality Childhood Center, part of University of Aveiro's campus
- Internet privacy and security enthusiast, always keen on supporting open-source initiatives
- Swimmer since 5 years old, formerly under competition regime, and combat sports enthusiast