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Ricardo Tourón Rodriguez

Front End Developer & 3D Graphics Engineer

Profile

Front-End Developer and 3D Graphics Engineer with a PhD in New Media Art. Over five years of experience blending creativity and technical skills in JS, WebGL, and GLSL to deliver high-performance and visually stunning web experiences. Seeking to leverage technical creativity to elevate digital projects.

Professional Experience

Freelance Web Developer & 3D Graphics Engineer   Oct 2022 - Present

Madrid, Spain

As a freelance web developer, I specialize in developing innovative web experiences that seamlessly integrate web development and 3D graphics engineering.

- Excelling in JavaScript, React, WebGL, and GLSL, I focus on designing and developing unique websites, interactive data visualizations, games, and generative art projects.
- My work is not confined to traditional web experiences. I have expanded my expertise to incorporate augmented reality (AR) and virtual reality (VR) experiences, reflecting my commitment to staying abreast of industry trends and technological innovations.
- I am deeply committed to providing services that align with client expectations and brand identity. My approach to each project is client-centric, prioritizing their needs and objectives to deliver bespoke solutions.
- Managing multiple projects simultaneously, I've honed excellent time management and organizational skills, enabling me to deliver each project on time and to a high standard.

3D Graphics Engineer @ Virtually Human   Apr 2021 - Sep 2022

Sydney, Australia

At Virtually Human, my role as a 3D Graphics Engineer involved enhancing the user experience and feature set of the ZED RUN on-chain game through my deep understanding of optimization techniques and 3D graphics.
- I identified and rectified performance issues in the ZED RUN on-chain game, significantly reducing load times and providing an improved user experience.
- Demonstrating my creativity and innovative thinking, I developed new game functionalities, such as a new camera control system and a POV mode compatible with VR, expanding the game's interactive capabilities.
- I delivered a significant performance optimization for the 3D racing application, increasing FPS by over 30%, even while incorporating new visual effects or improving the quality of some assets.
- Through various optimization techniques, including mesh instancing, geometry vertex reduction, texture atlas creation, and unification of all post-rendering effect passes, I streamlined the 3D graphic rendering process, enhancing performance and efficiency.
- I developed a comprehensive weather simulation system optimized for low-end devices, demonstrating my attention to detail and commitment to inclusivity.

Freelance Creative Coder, Web Developer & 3D Graphics Engineer   2018 - Apr 2021
Madrid, Spain

As a self-employed creative coder, I focused on creating immersive and interactive web experiences, from gaming to data visualization and generative art.

• Leveraging my expertise in JS, WebGL, and GLSL, I designed and built a peer-to-peer multiplayer online game akin to Rocket League, providing real-time physics and preventing cheating.

• I developed a comparative data visualization platform for academic research, reflecting complex data in an accessible and user-friendly way.

• I utilized my creativity and adaptability to design real-time, audio-reactive visuals for live music performances. Each visual was uniquely generated based on the analysis of live sound input from the concert, providing a unique and engaging experience for each performance.

• Strong communication and collaboration skills have been vital in managing client expectations and delivering to their specifications.

Teacher of Programming and Electronics for Creatives @ Espositivo   2017 – 2021
Madrid, Spain

At Espositivo, I was responsible for developing a comprehensive curriculum to introduce artists, designers, and other creatives to the world of programming and electronics.

• I designed a complete curriculum covering fundamental concepts to advanced topics, striking a balance between theory and practice.

• I implemented creative teaching techniques to foster a lively and effective learning environment, resulting in near-100% attendance and course completion.

• My dedication to promoting inclusivity in the tech industry was reflected in my approach to teaching, ensuring that all students, regardless of their background, felt empowered to engage with the material.

Education

Ph.D., New Media Arts, Cum Laude   2012 – 2017
Universidad Complutense de Madrid

During my doctorate, I specialized in exploring the intersection between traditional fine arts and modern technology, creating a body of work that pushed the boundaries of both fields. My research received the highest honors and contributed significantly to the academic conversation in the field of New Media Arts.

M.A., Contemporary Art Research   2011 – 2012
Universidad Complutense de Madrid

In my Master's program, I deepened my understanding of contemporary art and began to focus on integrating technology into my practice. This served as a solid foundation for my future PhD research.

B.A., Fine Arts   2006 – 2011
Universidad Complutense de Madrid

My undergraduate studies in Fine Arts provided me with a strong foundational knowledge of traditional art practices, which I continue to draw upon in my work as a web developer and 3D graphics engineer.

Skills

Technical Skills
JavaScript, WebGL, GLSL, React.js, Three.js, Blender, AR & VR

• My technical skill set is a combination of languages, libraries, and tools that are key to modern web development and 3D graphics engineering.

• With tools like Three.js and Blender, I can design and develop intricate 3D graphics, animations, and models.

• My work with AR & VR showcases my commitment to stay current with the latest technological advancements.

Soft Skills
Creativity, Problem Solving, Communication

• I believe my creativity is the core of my work, driving me to seek unique and innovative solutions to complex problems.

• Problem-solving is a crucial part of my work, whether it involves debugging code, optimizing performance, or finding the best way to represent data visually.

• Effective communication allows me to successfully manage client expectations, collaborate with teams, and teach complex concepts to beginners.