Stefano Lanza

Barcelona, Catalonia, Spain

✉ steflanz@gmail.com   📞 +34634789288

in linkedin.com/in/steflanz

Summary

I am highly experienced in the design and programming of technology solutions for games and other performance critical applications, with a specialization in graphics, game engines and C/C++ programming.

Experience

Principal Software Engineer
Foundry

Sep 2020 - Nov 2021 (1 year 3 months)

I worked on:
- FoundryGL - an OpenGL emulation layer built on top of Mesa, Zinc, Metal
- AVP - OpenGL based advanced rendering framework
- USD rendering plugin for Katana, Nuke and Pixar's USDView
- Misc. improvements and bug fixes for Foundry's DCC products

Senior Game Developer
Socialpoint

Jan 2018 - Apr 2020 (2 years 4 months)

As part of the Platform Team, my contributions were:
- Developed multiplatform core technology for IOS, Android and Windows
- Added support for in-game-purchases through the Microsoft store
- Extended Cocos2dx to load assets from compressed archives
- Integrated libwebsockets for network-based services
- Integrated Spine in our engine for 2D animations
- Misc. optimizations, bug fixes, maintenance tasks and SDK integrations

Subcontractor Software Engineer
ZeroLight

Jan 2016 - May 2016 (5 months)

R&D on photo realistic, real-time visualization of cars for the automotive industry, using the Unity engine. My contributions:
- Elliptical filtering for high quality anti-aliased, anisotropic texture mapping
- High quality, alias free image filters
- Specular anti aliasing
- A tool for grabbing huge resolution screenshots

Software Engineer
Havok

Sep 2013 - Jan 2016 (2 years 5 months)

As part of the Military & Simulation team, I developed:

• HLA network library for the synchronization of multiple systems simulating vehicles, articulated parts and characters.
• Photo-realistic, unconstrained rendering of the Earth atmosphere, running inside the proprietary Vision engine
• Real-time ambient lighting, based on spherical harmonics
• Aerial scattering, depth and height fog

Senior Graphics Programmer
Jagex
May 2011 - Dec 2012 (1 year 8 months)
As part of the rendering team for the game Transformers Universe, I developed most of the components of its graphics engine:
• Particle and VisualFX engine
• Terrain system with LOD, material painting and heightmap sculpting, ground cover
• Lighting (cascaded shadow mapping, point lights)
• Sky and aerial scattering
• Text rendering
• Memory allocators, in-game logging and profiling tools

Senior Rendering Programmer
Frontier Developments
Jan 2010 - Jan 2011 (1 year 1 month)
I was part of the rendering team of The Outsider, an unreleased AAA title for the Xbox360, PS3 and Windows platforms. My contributions were: water rendering, indexed deferred lighting, aerial scattering, lens flares rendering, volumetric lighting, deferred transparency.

Author
Typhoon 3D
Oct 2008 - Jan 2010 (1 year 4 months)
I am the author of the Typhoon engine (www.typhoon3d.com). The engine uses sophisticated and innovative technologies for the simulation of outdoor environments and many types of visual effects. Some of these technologies were licensed in the past for the development of a game and two visual simulations.

The engine main features are: component-based entity system, C++ / Lua interoperability, DirectX 9 backend, water animation and rendering, real-time caustics and godrays generator, terrain rendering, deferred lighting, aerial scattering, volumetric lighting, cascaded shadow mapping, dynamic sky lighting, unlimited reflections and refractions, character animation, collision detection and rigid body simulation, sound, particle engine and an AI steering library.

Programmer
Divenav
Oct 2006 - Apr 2008 (1 year 7 months)
I was the main programmer of the eDiving scuba diving simulator (http://www.ediving.us). I worked mainly on the graphics engine, physics simulation, networking, AI, GUI and partly on the gameplay.

I was also responsible for supervising and coordinating other programmers and artists.

Technology Programmer
Eutechnyx

Apr 2005 - Sep 2006 (1 year 6 months)

I worked on graphics effects and technologies for the Xbox and Windows platforms: water rendering, subdivision surfaces, spherical harmonics lighting, various shaders for the rendering of skin, vegetation and other materials.

I also worked on a sound library with FFT-based filters for pitch and frequency shift.

Education

Université libre de Bruxelles
Master Thesis, Artificial Intelligence

2004 - 2005

Here I wrote my master thesis on a vision system for robots, controlled by sensors and a neural network trained via genetic algorithms.

Politecnico di Milano

Telecommunications Engineering, Telecommunications, Physics, Electronics

1999 - 2005

Skills

DirectX • Shaders • C++ • Game Development • OpenGL • Lua • Real-time Rendering • Python (Programming Language) • iOS Development • Android Development