

Mariano Merchante

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About	Passionate about computer graphics, game development, procedural content generation and any technology that can create virtual worlds and stories. My aim is to develop and communicate in both technical and artistic aspects of these fields. A video with my work can be found here .
Education	University of Pennsylvania September 2016 - December 2017 <i>Master of Science in Engineering, Computer Graphics and Game Technology</i>
	Instituto Tecnológico de Buenos Aires August 2008 - July 2014 <i>Software Engineering, specialized in Image Sciences</i>
Awards	Jorge y Maria Rosas Fellowship 2016 Received the Beca Jorge y Maria Rosas, a full tuition fellowship awarded by Instituto Tecnológico de Buenos Aires to study a Master's Degree at the University of Pennsylvania.
Talks and Publications	SIGGRAPH - Fractal multiverses in VR 2018 Presented an approach for developing a fractal explorer, and design decisions along the process, including specific optimizations for raymarching in a VR context. ACM Paper
	GDC - Cone Marching in VR: Developing a Fractal Experience at 90fps 2018 Presented an optimization to ray marching in VR, within the context of a fractal explorer, CoralVR. GDC Vault
	PROCJAM 2017 Presented an approach to procedurally generate music videos and camera compositions based on pre-annotated songs and content.
	Exposición de Videojuegos Argentina 2015 Gave a talk about art asset pipeline, tricks and visual effects for mobile game development at EXPOEVA 2015.
Work Experience	Graphics Software Engineer - Framestore 2018 - Current Currently focusing on graphics development, research and optimization problems in the intersection between offline VFX and realtime fields, working for different clients and internal projects.
	Creative Developer - Framestore 2018 Developed interactive realtime experiences for both client and internal projects. Worked on graphics programming and optimizations, lookdev, effects, asset pipeline and general realtime development with tools like Unity and Unreal.
	Zombie Squad - Dedalord Games 2015 - 2016 Worked as Product Owner/Game Producer for Zombie Squad, released for iOS, Android and Web. Some of my responsibilities included being a mediator between a team of 10 and the publisher, coordinating the team. I also contributed to game design, art direction and did all the visual effects.
	Intensa-Mente Emociones Revueltas (Android) - Dedalord Games 2015 Worked as Game Producer/Technical Artist for Disney Latino's Intensa-Mente Emociones Revueltas. Led a small team and worked on gameplay, visual effects, asset pipeline integration and some game design.
	Party of Heroes (Android, iOS, Web) - Dedalord Games 2013 - 2015 Worked as Game Developer/Technical Artist on visual effects, graphics programming, gameplay, asset pipeline integration, optimization, UI and backend.
	Skiing Fred (Android, iOS) - Dedalord Games 2012 - 2013 Worked as Game Developer/Technical Artist on graphics programming, visual effects, optimization, UI and gameplay. Also did artistic tasks such as modeling and texturing assets and effects. Skiing Fred won Indie Prize Showcase Award 2013 Best Mobile Game . Got featured on Tegra-Zone for developing and supporting optimized graphics for NVIDIA's Tegra 4.

Various projects 2014-2016
Contributed to multiple projects inside the company, mostly related to technical art and asset pipeline. Contributed to the following shipped games: Messi Runner ([Trailer](#)), Finding Dory's Escape from the Touch Pool, Zootopia's Just In Time, Falling Olaf and Running Fred.

Academic Experience

The following is my academic experience at Instituto Tecnológico de Buenos Aires (ITBA).

Assistant Professor - Computer Graphics 2015 - 2016
Teaching, preparing, grading and giving lectures in a Computer Graphics course. Topics included raytracing, Monte Carlo path tracing and realtime rendering techniques.

Assistant Professor- Game Development 2015 - 2016
Teaching and giving lectures in a Game Development introduction course.

Assistant Professor - Final Project 2014 - 2015
Assisted a student group on their Kinect final project in which the user used the full human body to interact with sound.

Personal Projects

For a full list, check out my [github](#) profile.

Shadertoy demos ([Link](#)) GLSL
Some procedural shaders I've written in Shadertoy for fun, usually using raymarching.

SDF Generator ([github](#)) Unity, GLSL, HLSL
A signed distance function generator that generates optimized code for both GLSL and HLSL languages. Used on multiple shadertoy projects I've done.

Instance Along Curve ([Demo Video](#), [github](#)) Maya, Python
Maya API plugin developed with Python that tries to simplify the process of instancing various objects along a curve.

Related Qualifications

Main qualifications: Computer Graphics, C#, C/C++, OpenGL, Unity, Maya, HLSL/GLSL/Cg.

Programming Languages: C/C++, C#, Java, MEL, Python, Octave/Matlab, Javascript.

Libraries: Maya API, OpenGL ES, OpenGL, OpenCL, OpenNI, CUDA, SDL, Qt.

Tools: Unity, Unreal, Maya, Houdini, Substance packages, Redshift3D, mental ray, Arnold, ZBrush, Photoshop, After Effects, L^AT_EX, SVN, Git, Perforce, JIRA.

Art: Lighting, rendering, composition, modeling, texturing, rigging and digital painting experience. [Portfolio Link](#)

Miscellaneous

Introduction to Maya - Colegio Menor San Francisco de Quito 2007
When I was 17 years old I gave a short 6 week lecture to fellow students on basic Autodesk Maya skills as extracurricular work at my High School.

Promotions Chair - Colegio Menor San Francisco de Quito 2007
Organized the communication of school events as member of the Student Council.