

GAILLARD Matthias

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Gameplay / Engine Programmer

CAREER STATEMENT

A young and highly motivated post-graduate developer with a strong knowledge of engine and gameplay programming. Accumulating numerous hobbies and side projects revolving around video game such as game design, composing, 3D modeling, etc and using his different skills to bridge communication between core developers and game design team. Ambitious and looking for more diverse experiences leading him to more Game Design related positions.

WORK EXPERIENCE

- **Junior Engine Developer (Cpp, C#)** Since september 2018
[Artefacts studio](#) (Lyon, France) and [Kylotonn](#) (Paris & Lyon, France),
Transferring Game Assets from one In-house engine with minimal documentation to another for an incoming *unannounced AAA Racing game*.
Crafting and developing a new system allowing for a better management of game assets and their interdependencies.
Translating gameplay mechanics between the two different internal engines.
- **Junior Gameplay Developer (Unity, C#)** May-September 2018
[Artefacts studio](#) (Lyon, France),
Developed Skill system for *The Dungeon of Naheulbeuk – The Amulet of Chaos* (Tactical game, 2020) and its different subsystems. Challenge being the numerous amount of skills present in the game. Therefore the system and its UI had to be GD/LD friendly and centered around a « brick » system. Saving time for the designers while avoiding boilerplate and unmaintainable code for developers.
- **Internship Web Developer (php, js, pgsq)** April-July 2013
[Institut National Recherche Agronomique](#) (Orléans, France),
Beta tested the Zend Framework 2 for INRA to smooth their transition from Zend 1 to Zend 2
Developed web application used to track and chart agents activity

EDUCATION

- **Master (5th year) GAMAGORA** 2017-2018
[Université Lumière Lyon 2](#) (Lyon, France),
Syllabus ; Artificial Intelligence, 3D synthesis and real time rendering (OpenGL), ray-traced rendering, Unity 3D, 4 months joint project with public presentation.
- **Master (4th year) IGAI « Graphic Development & Picture Analysis »** 2016-2017
[Université 3 Toulouse Paul Sabatier](#) (Toulouse, France),
Syllabus ; 3D synthesis and real time rendering (OpenGL), ray-traced rendering, Audio and picture analysis, 3D capture and analysis, Compiler Engineering, Database management, Design Patterns, Linear Algebra, etc.
- **License (1st to 3rd year) STIC « Science, Information Technology and Communication »** 2010-2013
[Université d'Orléans](#) (Orléans, France)
- **Baccalauréat S-SI « Major in engineering »** 2010
[Lycée Léonard de Vinci](#) (Amboise, France)

PERSONAL AND UNIVERSITY PROJECTS

- **2019 *Strength Safety Links* (Unity)**, 2 days game jam projet, a top down 3D puzzles mixing different game mechanics (dash, slow motion, electric floors, etc) with smooth camera, multiple levels, controller support, etc
- **2019 *SDL Port (Vita)***, joint project, working on adding functionalities to the already existing but pretty barebone SDL support for the vita by using more native code whenever it is possible, adding proper rotation and viewport support, etc.
- **2018 / *Ecosystem* (Unity)**, 4 months scholar joint project, first person construction and management simulation game. The game takes place in a dynamic environment responding to polution, humidity and temperature, with differents biomes evolving accordingly.
- **2018 / *Viscous Fluid Simulation* (C++, SFML)**, Partial implementation of a paper named « 2D Particle-based viscoelastic fluid simulation ».
- **2018 / *Embryo* (C++, OpenGL)**, homemade draft of a 3D engine featuring hotswappable shaders, support of multiple format .stl, .off, etc, skyboxes, controllable camera, mirrors, etc.
- **2018 / *Raytracer* (C++, OpenMP)**, Homemade draft of a multi threaded raytracer engine.
- **2018 / *MagicTrick* (Unity, C#, OpenCV)**, Augmented Reality puzzle game, using a webcam and a pen the player must move a ball to its destination preventing any fall or damages done to it.
- **2017 / *[Open]_World* (Unreal Engine 4, HTC Vive, Arduino & printer)**, Art Exposition / Video Game inviting the public to an abstract world throught HTC Vive. During play session the printer (hooked to UE4 throught an arduiuno) will print the player's coordinates and other informations reflecting how every decision in the virtual world my impact you in the real one.
- **2017 / *The Sleeping Pit* (Unity)**, First Person puzzle game using physics and ennemy duplication as a puzzle and horror mechanic.
- **2016 / *Mirror's Edge Catalyst SpeedOMeter* (C++)**, Trainer hijacking memory to print the player's character speed using the in-game HUD.
- **2013 / *2DGeometryMaze* (Android, AndEngine)**, Android game using gyroscope to guide a ball through a « multidimensional maze ».

COMMUNITY SERVICES

- Volunteering for **7Cups** and other local mental healthcare associations. After overcoming some personal and familial issues of my own, I came to the realisation that some of the lessons I learned could be useful to others. At the very least having someone « who've been throught it » to talk to / to vent can really help.
- Volunteered (2013 to 2016) on **Stunfest** festival, attendant on a rythm'n game booth, in charge of greeting and introducing different games to the public.

LANGUAGES

- French : Native
- English : Proficient
- Spanish : Basic

INTERESTS

- Music Composing and Producing, mostly chiptunes, low-fi, short orchestral music.
- Graphical Designs, learned how to use SolidWorks into highscool, took a quick dabble at aDDict2 (demoScene engine/modeling tool) and now looking at Blender to be more efficient at my work with graphists and hopefully overtime to create my own models conveying my own graphical ideas to others.
- Mechanical and engineering tinkering, if something isn't broken don't fix it, but if something is indeed broken, don't throw it away. Fixing various objects, consoles around me gave me a better understanding at how they work and their inner design. It gave me confidence to work on my own projects such as homemade arcade controller for various rythmn game, my own bartop arcade, etc
- PSP, PSVita development scene, as a developer it's fascinating to see how people with no official entry point whatsoever can push a hardware. So of course when I've got time, I jump in.
- Competitive gaming (csgo, dota2, etc), the dedication it takes to master those games revolving around communication and teamwork makes the reward all the more interesting and fun to me.