

Llorenç Solé Franquesa

PERSONAL INFORMATION



I'm a guy that loves technology combined with audiovisuals, playing music with my friends, and creating new projects to increase my knowledge about my concerns.

Now, I'm very motivated and focused on the video game industry, specializing in Engine programming. When I'm inspired, I have fun doing some shaders.

CONTACT

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SKILLS

Programming Languages

C++ / C# • GLSL / HLSL • Python

Engine Programming

3D Math skills (linear algebra, vector math) • SDL Graphics pipeline (OpenGL) • Optimization Audio pipeline (Encoding / Compression, DSP, OpenAL)

Graphics Programming

BRDF model (Phong/Cook-Torrance) • Shadows Lighting • VFX Shaders

Programming Software

Git • Visual Studio • SHADERed • RenderDoc

Other Software

Unity • Unreal • Photoshop • 3D Max Ableton Live • Wwise

Soft Skills

Self-motivation • Proactive Attitude • Teamwork

LANGUAGES

Catalan (Native)

Spanish (Native)

English (Professional)

PROFESSIONAL EXPERIENCE

BMAT LICENSING | SOFTWARE ENGINEER

2018 - 2021 | Developer & Tech client manager (Tech-Ops)

- Working as a developer using **Python**, Docker, SQL, MongoDB, and AWS.
- In charge of different clients, giving technical support.
- Responsible for an international team project as technical manager.
- Working in an **Agile/Scrum** methodology.

PERSONAL PROJECTS

GOYA'S NIGHTMARE | UNITY VIDEO GAME

Cultura Abierta, 4º Edition Game Jam

Goya's Nightmare is a Slenderman-style game inspired by Goya's dark-era paintings.

INDEPENDENT PROJECTS | C++/C#, GLSL/HLSL, PYTHON

In my non-working time, I like to develop some projects from my own, for instance:

- Creation of **VFX shaders** like rain, volumetric ice, distortion shaders.
- Different 2D Games using **Unity** and **C#**
- A Telegram Bot for an association using **Python**

Personal work available in Github and webpage.

EDUCATION

MASTER OF ADVANCED PROGRAMMING FOR AAA VIDEO GAMES | UPC SCHOOL

2020 - 2021 | Lead Audio & Engine Programmer. With Honors.

As **Lead Audio**, in charge of the composers team, the sound design, and creating sound effects for the project.

As **Engine Programmer**, developing **Tesseract**, our custom Engine created from scratch. In charge of different modules:

- **Graphics**: in charge of the graphics pipeline implementing Micro facets BRDF Theory from Cook-Torrance, lighting model, alpha blending, shader module, and optimization.
- **Audio**: implementing all the audio module integrating the OpenAL library. It includes the audio library and all the components inside the engine like the importer, Audio Source component, and Audio Listener component.
- **Particle System**: developing the full system from scratch with features like gravity, shapes, emission, over-lifetime modifications, sub emitters, lights, and randomness/behavior curves, among others.

Read more about my work as Engine Programmer [here](#).

Our final project, **Shut Down**, is a cyberpunk-themed Twin-Stick Shooter.

BS IN TELECOMMUNICATIONS | ETSSETB SCHOOL (UPC)

2014 - 2019 | Audiovisual System specialization

Birds Sound Detection Using Convolutional Neural Networks The objective of this thesis is to learn how to train and test a Deep Neural Network using a Convolutional Neural Network architecture.

HOBBIES

Musician. Percussion instrument role

Always Drinking Marching Band and Digal's-hi Inquiets.

Organization of Cultural Events

Cultural and popular events in my city during the year, from a humor festival to folklore festivities.

Leisure monitor