

Jonathan Maldonado Contreras

Plaza Vilaflor n°6 0404

Madrid 28017, Spain

Email: jonathan.mcontreras@gmail.com

Web: www.jonathanmcontreras.com

Github: <https://github.com/Jonazan2>

Phone: +34 677621767

Skills

- **Programming languages:** C++ (4 years) including C++11 and C++14, Java (3 years), C (2 years), Python (2 years), C# (1 year).
- **Graphics programming:** 3D graphics pipeline, Shaders programming (GLSL), optimization.
- **Gameplay programming:** agents, states machines, movement and path finding, artificial intelligence, Lua.
- **Commercial Engines:** Unity (< 1 year), Unreal Engine (< 1 year).
- **Development tools:** Visual Studio 2013/17, g++, Clang, Jenkins, GIT, SVN.
- **Math:** vector and matrix algebra, geometry and interpolation.
- **Algorithmic:** data structures, sorting, backtracking, greedy and optimization.

Experience

C++ Developer

Gameloft S.L.U. Madrid - Spain

N.O.V.A Legacy, online, anti-hacking, graphics programming, lua gameplay, optimization.

May 2016 – Present

Android Developer

IceMobile Agency B.V, Amsterdam – The Netherlands

Development of Android applications in Java and Gradle.

September 2014 – May 2016

C Developer

MagicBox Interactive & Television, Madrid – Spain

Development of low level protocols in C (dsm-cc) and custom ROM for Android.

November 2013 – September 2014

C++ Artificial Vision Developer

The Grafter, Madrid – Spain.

Development of artificial vision algorithms based on Brisk and mathematical morphology with OpenCV.

January 2013 – September 2013

Education:

- **Software Engineering (Computer Science)**, Polytechnical University of Madrid. 2010 – 2014
- *First Certificate in English*, Cambridge University 2014

Game Projects:

- 2016 – 2017 **“N.O.V.A Legacy”, C++ Developer** (team of 25)
- Design and implementation of a transactional system for anti-hacking.
 - Design and implementation of the loot box system.
 - Graphics programming for the first three updates.
 - Size optimization (25MB APK without additional download): substance, compression.
 - Online Development: backups, gifting, profile synchronization.
 - Implementation of the save system, including the save encryption.
- 2014 – 2017 **“PatBoy: Game Boy Emulator”** (personal project – open source)
- Development from scratch in C++ of the game boy emulator: CPU, graphics, memory chips, audio, interrupts, input, timers. It also has a fully visual debugger including: breakpoints, watchers, register, flags.
- 2017-2018 **“Software renderer”** (personal project – open source)
- Development from scratch in C++11 of a software renderer: math classes, primitive drawing, zbuffer, diffuse mapping, normal mapping, specular mapping, shader system, model transformations, custom camera and light positioning.