

# Soufiane KHIAT

Software Engineer;

46 rue de la plaine

86000 Poitiers

France

Nationality: French

[contact@soufiane-khiat.com](mailto:contact@soufiane-khiat.com)

+33 6 08 73 40 98

[www.soufiane-khiat.com](http://www.soufiane-khiat.com)  
[soufianekhiat.wordpress.com](http://soufianekhiat.wordpress.com)  
[devblog.soufiane-khiat.com](http://devblog.soufiane-khiat.com)

## Objectives

Use and improve my skills to be an essential part of a team.

## Professional Experience in Game Industry

**Engine Programmer (Graphic and System, summer 2011)**

Contact: Jean-Georges Leveux - Production Director  
[jg.levieux@ekosystem.com](mailto:jg.levieux@ekosystem.com)

**Eko System** (Paris, France): *Aqua Panic, Gift, Plan, Garfield, Spray...*

Working Title: Wanted Corp (PSVita)

Tasks:

- Implement a **Deferred Shading/Lightning** in PSVita
  - Change Tool Chain for PSVita
- **Optimize Deferred Render Loop** in PSVita

**Engine Programmer (Graphic, summer 2010)**

**Kylotonn Entertainment** (Paris, France): *Bet On Soldier, Speed Ball 2, The Cursed Crusade...*

Working Titles: *The Cursed Crusade* (PC, PS3, X360), *My Body Coach 2* (PS3, PSMove) and unannounced title (PS3, PSMove)

Tasks:

- Implement a **Stencil Mirror** for PC, PS3, Xbox360
  - Integration in **Tool Chain** for Graphist and Level Designer
- Implement a **Water Shader** for all platforms
  - Transparent
  - **Fresnel**
  - **Vertical Fog** "Subsurface scattering"
- Optimize a **Deferred Render Loop**

## Video games related project

*Walk The Line*: 3D Platform Game With **Kinect** (Spring 2011)

Tasks:

- Implement **Kinect motion recognition**
- Integrate sound engine Audiokinetic **WWise**
- Integrate **5.1 sound** system
- Manage rendering for **3D stereoscopic** system
- Implement some gameplay features

## Focus

- Work on **shipped AAA** title (The Cursed Crusade Atlas)
- **Fluent in C++**
- Experience in "Next-Gen" Console (4 Games)
  - **PS3** (GPad)
  - **XBox360** (PIX)
  - **PSVita** (Razor)
- Knowledge in Graphics Programming
  - **DirectX (HLSL)**
  - OpenGL (**GLSL**)
  - **Cg**
  - **Deferred Shading**
  - Lighting Algorithm
- Knowledge in **3D Mathematics**
  - Linear Algebra
  - Lighting
  - Physics
  - ...
- Experience with Professional Engine
  - Unreal
  - PlayAll
  - kjAPI
  - Unity3D
- International mobility

*Space Loop*: **2D Puzzle Game** with Space Pirate (Spring 2011)

Website: <http://spaceloop.blog.lemonde.fr>

Tasks:

- **Implement 2D physic engine** “from scratch”
- Balance physic engine between physic simulation and fun

*ECHO*: Develop “**Tower Defense-Shoot’em Up**” (Spring 2011)

Website: <http://www.echo-the-game.com/>

Tasks:

- Implement digging planet system
- Integrate Sound Engine (WWise)
- Implement **iPhone & Android** portage with Hydrogen Engine (under development)

*Infinity*: C++ Framwork for **city procedural generation** (Fall 2010)

(Road network expansion, building volume, facade...) (Under development)

It’s **Data-Driven System**:

XML→Data →[Generators] →Generate Topology Objects →[Meshing]→Generate Geometrical Objects  
→Generate Scene Graph →Load in Graphic/Game Engine

Website: <http://devblog.soufiane-khiat.com/>

Tasks:

- **XML Parsing**
- Data Generator for: User Data, City Centers, Roads, Facades
- Topological Object Generator for: City Center, Roads, Facades

## Skills (ordered by mastery)

Softwares	<b>Visual Studio</b> (7, 8, 9, 10), <b>PIX</b> (For Windows & Xbox), <b>GPad</b> , <b>ProDG</b> , <b>Razor</b> , SN-DBS, FX Composer, Cruise Control, Incredibuild, PhotoShop, Maya (PLE, 9, 2010), 3DSMax (2010)
Tools	Design Pattern, UML, SVN, Source Safe
Languages	<b>C++</b> , <b>C</b> , <b>HLSL</b> , <b>Cg</b> , <b>GLSL</b> , <b>C#</b> , Java, uScript (Unreal Script), PHP, SQL, WPF, Ocaml, ADA, VBA...
Programming	Graphics (Real Time Rendering, <b>Deferred Rendering</b> /Lighting, <b>Shaders</b> , and 3D topology), <b>Physics</b> (Soft Body, spring, fluid...)
Libraries	STL, <b>DirectX</b> , OpenGL, XNA, <b>PhysX</b> , gcm, gxm, boost (Graph, Random, <b>Thread</b> , Spirit...), <b>OpenMP</b>
Engines	<b>PlayAll</b> , Unity3D, <b>Unreal Engine</b> , kjAPI, Ogre3D, Hydrogen ( <b>iPhone</b> , Android)
Platforms	PC, <b>X360</b> , <b>PS3</b> , <b>PSVita</b> , iOS, Android

## Educations

2012	<b>Master’s Degree in Video Games Programming</b> Graduate School of <b>Video Games</b> and Interactive Medias (ENJMIN: <a href="http://www.enjmin.fr">www.enjmin.fr</a> )
2010	<b>Bachelor’s degree in Mathematics and Computer Science</b> University of Poitiers (France)
2007	<b>Measurement in Physics</b> Institute of Technology of Châtelleraut (France)
2006	<b>Baccalaureate in Engineering Sciences (Major in Mathematics)</b> Innovated Pilot High School (France)

## Languages

Native	<ul style="list-style-type: none"><li>• French (fluent)</li><li>• Arabic (Moroccan)</li></ul>
Learned	<ul style="list-style-type: none"><li>• <b>English</b> (spoken, written)</li><li>• Japanese (notion)</li><li>• Spanish (notion)</li></ul>

## Interests

Sports	Thaï Boxing, Boxing, Taekwondo, Jogging
Reads	Popular science, SciFi, Classical literature (Faust, Art of War...)
Cinema	<b>Scorsese</b> , Coppola, <b>Aronofsky</b> , Lynch, Tarantino, Hitchcock...
Visited countries	<b>England</b> ( <b>London</b> , Birmingham), Scotland (Edinburgh), Italy (Rome, Venice, Milan), Spain, Morocco
Other	Brevet in <b>Aerospace</b> (BIA)