

CAREER OBJECTIVE

Get involved into AAA game development industry to work on advanced engine and learn from the best in order to ship stunning games.

WORK EXPERIENCE

Game engine development internship at **Pastagames** in Paris – 2015 (*present*)

- Development in C++ on Pastagames' game engine.
- Working on Wild, next game of Michel Ancel (Wild Sheep Studio) for PS4.
- Improvement of existing tools (assets pipeline, profiler ...).
- Developments of core's features (sound engine, memory tracer ...).

Game engine development internship at **Ubisoft Montreal** – 2015 (*8 months*)

- Development in C++ on Dunia game engine (used for Far Cry).
- Working in Engine Team on an unannounced AAA (PC and consoles).
- Existing codebase upgrade and maintenance (serialization, compression, threads, containers ...).
- Debugging and fixing work on game engine and world editor.
- Deep integration into the development process and organization.

Game engine development internship at **Cyanide Studio** in Paris – 2014 (*4 months*)

- Development in C++ on CyaTek, Cyanide's cross platform game engine.
- Tools development : world editor, assets manager, GUI editor (C++, C#).
- Tutor evaluation : "A great maturity and a very good level in code architecture".

Activefab founder, web development studio in Paris – 2010 (*3 years*)

- Business management.
- Drafting commercial proposals, quotes, invoices.
- Developing promotional websites (movies, architecture agency...).
- Technical interventions with political or associative organizations.

Freelance web developer – 2008 (*2 years*)

- Mastering tools and techniques of web development (HTML, CSS, JavaScript, PHP, Drupal CMS...)

EDUCATION

Concordia University (Montreal, Canada) – 2014 – 2015
Foreign student exchange

Epitech (European Institute of Technology) – 2012 – 2016 (*present*)
Combined Bachelor/Master's degree in Computer Science

Paris IV Sorbonne – 2009
Bachelor's degree in Philosophy (DEUG)

Lycée Racine, Paris – 2006
High School diploma in Economics

MAIN PROJECTS

3D game engine – *currently* – <https://github.com/Another-Game-Engine/AGE>

- Development of a 3D game engine in partnership with AMD. (Open source)
- OpenGL 4.3, C++11.
- Implementation of graphical effects, physics simulation and deferred shading.
- Entity component system architecture and data oriented programming.
- Multi-threaded architecture (pipeline and jobs).

- Assets and game objects serialization.
- World editor (placing objects, entity edition, prefabs edition).
- Frustum culling : octree and parallel *brute force culling* (<http://goo.gl/GHloHt>).
- Occlusion culling.
- Skeletal animation and GPU skinning.
- Oculus Rift integration.

LiveMemTrace – currently – <https://github.com/cesarl/LiveMemTrace>

- Header only C++ library designed to trace and display game allocations at runtime. (Open source)
- Stack inspection, caller / callee display, function tracking.
- Working on Windows and PS4. Used on Wild and AGE.

StringID – currently – <https://github.com/cesarl/StringID>

- Header only C++ library and command line executable used to hash strings. (Open source)
- Executable hash string offline from literals directly into source code.
- Library hash strings at runtime, load and maintain a database.

Main Epitech projects – 2012 / 2013

- Snake game in C++ using different graphics libraries (grade A).
- Clone of *Bomberman 3D*, C++, OpenGL (grade A).
- Several UNIX C development: a complete *Shell* recoded, commands and functions of "ls", "printf", "malloc" implemented and an IRC server developed (grade A).
- C raycasting engine for a *Wolfenstein 3D* clone.
- 2D Game Experiments (personal project in lab : exploration of different architectural approaches used in the development of 2D video games through the realization of a clone of the game *Binding Of Isaac*.)

Epitech Game Dev Lab Summer camp – summer 2013

- Summer camp participation after being selected by Epitech's game development laboratory.
- Racing game development using Oculus Rift (Unity) and FPS prototype using Oculus Rift.

Coursera.org – 2012 / 2013

- Participation in several Coursera.org courses.
- Algorithms, Princeton.
- Algorithms: Design and Analysis, Stanford University.

Game Jams and MeetUp – 2012 / 2013

- Ubisoft Academia 2013 contest at Montpellier.
- Development of a 2D runner game in HTML5/JavaScript at the contest organized by CodeYourJob BeMyApp.
- Android app developed for the Dailymotion BeMyApp contest.
- Co-founder of Paris Game Development MeetUp group.

SKILLS

C, C++.

Game engine development (architecture, optimization, multithreading)

PC and console development (Xbox One, PS4)

Visual Studio, Git, Perforce, FastBuild.

Github, Jira.

RECOMMENDATION

Fabrice Granger, technical director at Cyanide Studio, Paris.

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Mickaël Gilabert, graphic lead at Ubisoft Montreal.

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David Chabot, engine team lead at Ubisoft Montreal.

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LANGUAGES

French: native language.

English: high level, TOEFL 95, TOEIC 850.

Spanish: intermediate level.