

WORK EXPERIENCE

Game engine development internship at **Pastagames** in Paris – 2015/09

- 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** – 2015/02 – 2015/08

- Development in C++ on Dunia game engine (used for Far Cry and Watch Dog).
- 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 – 2014/04 – 2014/07

- 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 – 2010/09 – 2013/01

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

Freelance web developer – 2008 / 2010

- 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
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 *Bombberman 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

Frabrice 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.

INTERESTS AND HOBBIES

Video Game development, dance, trapeze, hiking, poetry, philosophy.