

WILLIAM BUSSIÈRE

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Phone number : (450) 641-9025

Languages: French, English

EDUCATION

University studies

2010 to 2016

- Software engineering, multimedia concentration, baccalaureate
- Credits completed: 68 / 120
- Cumulative average: 3,91 / 4
- Citation of academic excellence
- École Polytechnique de Montréal

Cegep studies

2008 to 2010

- Pure and applied science
- End of DEC project in electronic: mounting of an electric guitar pedal
- Collège de Maisonneuve, *Montréal*

WORK EXPERIENCE

Software development 10 months internship at Zimmer CAS, *Montréal*

2012 to 2013

- Implementation of the Model-View-Controller design pattern
- MRI manipulation and rendering with GDCM and VTK libraries
- Design of graphical user interfaces with Qt
- OTS validation and documentation of the developed applications

INF1010 course restructuration intership, *École Polytechnique de Montréal*

summer 2011

- Writing of course notes about graphical interfaces and the STL library
- Writing of object-oriented-programming exercises and examples
- Writing of short evaluations for the students
- Restructuration and design of the Moodle website of the course

SKILLS AND ACHIEVEMENTS

Design of libraries for the creation of games and simulations

2011 to today

- *Experiemental Theatre* : C++ library grouping the following libraries taking advantage of the theater analogy to name the classes and to define their responsibilities
- *Cellar Workbech* : Data structures, generic design patterns, logging, geometric primitives
- *Media Workbench* : Graphical (OpenGL/GLSL) and audio libraries adaptors
- *Prop Room 2D* : Framework for the management of 2D shapes (physics and rendering)
- *Scaena* : Framework for the creation and management of entities in games or simulations
- The software modules are presently implemented in Qt and OpenGL, but could easily be ported to other libraries of the same type
- Available on Github : <https://github.com/wibus/ExperimentalTheatre>

Design of an Air Hockey game

2012

- Interfacing Java code with a C++ framework via JNI
- Design of the graphical user interface
- Use of multiple design patterns : Façade, Command, Singleton, Observer, State, etc.
- Implementation of the physics engine

Building and programming of a robot

2011

- Assembly of the motherboard for an ATmega16 microconroller, of an H bridge and of the gears for a small electric motor
- Interfacing of a magnetic captor, infrared captor and of an external memory for the reading and writing of bytecode
- Development of a program for the travelling of the robot in an obstacle course

SCOLARSHIP AND AWARDS

***Philip et Lily Malouf* award**

winter 2011

Winning team of first year technical project

General Director scholarship

autumn 2010

Academic excellence

HOBBIES AND INTERESTS

Arts: guitar, writing, sculpture

Sports: unicycle, tennis, badminton