Martin Côté

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Profile

I am a software developer located in the Montréal region. I am currently a senior game programmer writing C++ code, but I am also very proficient in a large variety of languages and frameworks, spanning from low-level C/C++ to abstract Lisp code.

I am really passionate in my work. I love learning new languages and tools, and do so whenever I can. I spend my free time prototyping ideas in Unity, hacking Python scripts or browsing GitHub projects. I eat, live and breathe every aspect of computer science.

Experience

Senior Gameplay/UI Programmer — Eidos Montréal   **2013 - present**
- Senior programmer on Thief and Deus Ex: Mankind Divided.
- C++ and C# programming on Dawn game engine (in-house).
- C++ programming on Unreal Engine 3.
- Cross-platform UI development using Autodesk Scaleform.
- System programming on PlayStation®3, PlayStation®4, Xbox 360 and Xbox One.

Lead iOS Game Developer — Loopycube   **2009 - 2013**
- Lead iOS developer for various titles on the App Store (Go Native, Pickpawcket, All in).
- iOS development in Objective-C, C and C++.
- Real-time graphics using OpenGL ES 2, Cocos2d, Core Animation and Quartz2D.
- JavaScript and Lua bindings for level and frontend scripting.
- Backend development in Python on Google App Engine infrastructure.

Independent iOS Game Developer — MicroCars   **2008**
- Personal project that turned real. Almost one million downloads to date.
- iOS development in Objective-C with specific C optimizations.
- OpenGL ES 2.
- Realtime physics using Chipmunk.
- Mac OS X level editor written in Cocoa.

Senior Software Developer — Vircom   **2008**
- C++ developer on the Modus anti-spam services.
- Worked on various SMTP, POP and IMAP features.
- End-to-end email encryption feature using PGP.
- COM programming.
- Linux port of spam-filter service.

Senior Software Developer — INRO   **2004 - 2008**
- Developer of the Emme 3 transportation planning software.
- Developer of the INROKey USB software protection system.
- C++ development using Qt, Boost and STL.
- GIS integration using ArcGIS.
- Cross-platform development (Windows, Linux, Solaris).

Education

M.Sc. Computer Science — Université de Montréal   **2002 - 2004**
Computer graphics laboratory. (http://www.ligum.umontreal.ca)
Master thesis: *Rendu Non-Photoréaliste de chevelures*.
Important courses: image synthesis, image processing, 3D vision.

B.Sc. Computer Science — Université de Montréal   **1999 - 2002**
Software engineering specialization.
Important courses: data structures, software engineering, computer architecture, operating systems, computer graphics.

Publications

Martin Côté, Pierre-Marc Jodoin, Charles Donohue and Victor Ostromoukhov.
Non-Photorealistic Rendering of Hair for Animated Cartoons.
Graphicon'04 proceedings.

Skills

Languages	Tools	Libraries
• C/C++	• Microsoft Visual Studio	• OpenGL
• Objective-C	• Apple XCode	• GLSL
• Python	• Unity3D/MonoDevelop	• Cocos2d
• Java	• Unreal Engine 3	• UIKit/Cocoa
• Javascript	• Git/Perforce/Subversion	• Core Data
• Lisp/Scheme	• Emacs	• Core Animation/Quartz
	• GDB	• Boost
		• STL

Operating systems experience:
- Microsoft Windows
- Mac OS X
- Linux (Ubuntu, CentOS, Debian)

Personal Projects

I am often inspired and concretize new software projects. They have been invaluable for learning new technologies and design concepts. Here are a couple of projects that I am currently working on:

- **SList: A Lightweight Lisp Compiler**
  I wrote a Lisp compiler in C++ with the goal of making an "easy to embed" scripting language. The compiler has full support for lambdas, symbols, let-constructs and macros. (https://github.com/mcoted/slist)

- Realtime **Video Compositor**
  Using the Mac AV Foundation framework, I am working on a fully fledged video compositing software to add special effects on raw videos. The frames are rendered in OpenGL. Special effects are executed in GLSL with the help of the GPUImage framework.

- **iOS Expenses Tracking Software.**
  Tracking expenses with my girlfriend was a pain, so I developed an iOS application that synchronizes our spendings and tells who owes how much at the end of the month. Client is developed in Objective-C using UIKit. Backend is written in Python on Google App Engine.

- I proudly completed every 33 Python challenges! (http://www.pythonchallenge.com)

Other Interests

- Playing with my two wonderful kids
- Badminton
- Tennis
- Music

Languages

I am fluent in English and French.

References

References will be provided upon request.