

Research Engineer

Looking for a challenging job in Europe, starting from February 2011.

EXPERIENCE

- Oct. 2010 – Jan. 2011 • **Microsoft Research - Cambridge, UK:** Software Engineer (contractor)
Making interactive execution of F# programs available in Silverlight (and Moonlight on Linux/Mac). Tasks include working on the F# compiler architecture, and making adjustments needed to host compilation.
- May. 2010 – Oct. 2010 • **Microsoft Research - Cambridge, UK:** Software Engineer (contractor)
Improved user-experience for using F# with Mono, on both Linux and MacOS (installation packages, tests, compiler bug fixes).
- Jan. 2009 – Apr. 2010 • **MLstate - Paris, France:** Research Engineer
Worked on the compiler for MLstate's new functional programming language for Web development, and implemented a fast asynchronous HTTP server (on Linux and Windows), using OCaml and C.
- Oct. 2008 – Jan. 2009 • **Microsoft Corporation - telecommuting:** Test engineer (contractor)
Analyzed performance of the F# programming language, with the compiler team (language constructs and library routines), did performance comparisons with the C# language.
- Apr. – June 2008 • **Microsoft Research - Cambridge, UK:** Research intern
Worked in the F# compiler team (library design, testing, bug fixing...), supervised by Don Syme. Improved the asynchronous and parallel library.
- Feb. – Dec. 2007 • **Intellifactory - Budapest, Hungary:** F# developer intern
Wrote a complete functional and object-oriented compiler for the .NET framework (lexer, parser, type inference, and .NET bytecode generation). Worked on a website using ASP.NET and F#.
- Sept. – Dec. 2006 • **Epita - Paris:** Teacher assistant in C and Unix Shell.
Taught C, system programming, shell script and Sed to third year students (460 hours). Wrote courses and exams.
- Sept. 2004 – June 2005 • **Epita - Paris:** Teacher assistant in OCaml and Delphi.
Created courses and exams for OCaml and Delphi computer languages to assist first year students (group of 40 student, 90 hours). Evaluated and graded completed exams.

IT KNOWLEDGE

- Functional languages • **F#, Objective Caml**, Lisp
- Scripting • **Shell Script, Sed**, PHP, JavaScript
- Imperative languages • **C, C++, C#, Delphi**
- Operating Systems • **Windows, Linux, *BSD**
- Theory knowledge • **Optimization, 3D Graphics, Functional programming, Digital image processing, Compiler writing, Constraint programming, Template metaprogramming (C++)...**

EDUCATION

- 2004 – 2007
 - **Epita**: 5 years degree (engineer's degree) in computer science
Major in Cognitive Sciences and Artificial Intelligence.
Some school projects: a compiler implementation (in C++), a Lisp interpreter (in OCaml), a Unix shell (in C), a virtual machine and an assembler (in C)...
- Autumn 2005
 - **Tampere University of Technology**:
Exchange student for one semester in Tampere, Finland.
Information Technology department: signal processing courses
- 2002 – 2004
 - **Epita**: 2 years intensive undergraduate degree course

PERSONAL PROJECTS

- **Emacs mode for F#**: Written in Emacs Lisp, featuring syntax highlighting, interactive shell support, indentation. <http://sf.net/projects/fsharp-mode/>
- **GLSL Minifier**: An advanced obfuscator and minifier tool for the OpenGL Shading Language. It includes many code transformations based on the syntax tree. http://www.ctrl-alt-test.fr/?page_id=7
- **Incubation**, a demoscene production: a 64kb real-time computer animation made with C++ and OpenGL, including 3D graphics and music. It won the competition at Evoke demoparty. http://www.ctrl-alt-test.fr/?page_id=94

LANGUAGES

- **French**: Native language
- **English**: Fluent (TOEIC)
- **German**: Scholastic level (5 years of study)

ADDITIONAL INFORMATION

- 2008 – 2009
 - Microsoft “Most Valuable Professional” award (for F# expertise)
- 2003 – now
 - Prologin association: writing and correcting algorithmic exercises
 - Finalist at the French National Contest in Computer Science (Prologin)
- 2002
 - Computer-assisted music composer
 - Interested in French literature, and constrained writing (Oulipo)