

MICHAEL FICARRA

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OBJECTIVE Full-time position in the software architecture and engineering field

EDUCATION Worcester Polytechnic Institute, Worcester, MA
Master of Science in Computer Science, expected May 2012
Thesis: Compiling Cryptographic Protocols to a Declarative Target
Bachelor of Science in Computer Science, awarded February 2011
Major Qualifying Project: Generating Universal Models for Geometric Theories

INFLUENTIAL COURSEWORK

Software Security Engineering • Protocol Analysis • Database Systems • Algorithms
Techniques of Programming Language Translation • Discrete Mathematics
Object-Oriented Analysis & Design • Operating Systems • Software Engineering

EXPERIENCE *Google Caja Intern, Google Summer of Code 2010* *May to August 2010*
Caja is a Google project whose goal is to allow rich web applications to safely embed untrusted third-party HTML, CSS, and JavaScript. Caja allows communication between modules through exchanges of references to JS objects, relying on an object-capability model for security. Determined why the behaviour of popular JS libraries was not being preserved, and proposed fixes to both the Caja and library developers.

Web Application Developer, Solstice Technologies *January 2008 to August 2010*
Worked on and managed projects that required the use of server-side scripting languages, most commonly PHP, and a relational database such as MySQL. Projects were taken from concept to completion through collaboration and teamwork with fellow employees.

Intern, Skarven Enterprises, Berkeley Heights, NJ *May to August 2009*
Designed and implemented a custom, domain-specific programming language to be used by people with little prior knowledge of programming languages so they could create integration tests for the company's main product. The compiler and interpreter for the custom language were written in Ruby.

TECHNICAL SKILLS *Expert* JavaScript, CoffeeScript
Proficient Haskell, Ruby, C, PHP, SQL, HTML, CSS, BASH
Capable Scala, C#, C++, Java
Interested Self, Smalltalk, Erlang, Perl, Python, Go, F#, Scheme

ACHIEVEMENTS Major CoffeeScript language developer and active maintainer of its official compiler
Technical editor for the Pragmatic Programmers' CoffeeScript book
Contributor to at least 35 open source projects, mostly libraries or developer tools
Contributor to other JavaScript-related compilers including js2coffee and UglifyJS

INTERESTS Programming language design and compilers
Software security, testing, applied logic, and protocol analysis
JavaScript, particularly its application outside a browser environment
The event-driven paradigm seen in languages like JavaScript and Self
The actor model of concurrent computation, as seen in Scala, Io, and Erlang
Non-relational databases: MongoDB, Neo4j, Redis

PORTFOLIO *Github* <http://github.com/michaelficarra>