

## Doug Orleans

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## Employment

### **Dec. 2011–present** MCNA Dental, Fort Lauderdale, FL

Developed and maintained various features of DentalTrac, a Ruby on Rails web application used by the entire company for managing dental insurance claims, subscribers, and providers. Projects worked on:

- Building a Rails front-end for a Lisp/PostgreSQL-based workflow/business-process management system.
- Building a case management tool for the fraud, waste, and abuse department.
- Complying with state regulations for new dental plans (Texas CHIP and Medicaid).
- Migrating the database from MySQL to PostgreSQL and updating db-specific dependencies in the code.
- Upgrading the app to use Rails 3.1.1 (from 0.12) and modern Rails coding practices.
- Generally improving reliability, usability, and performance.

### **Jun. 2009–Dec. 2011** Appleseed Software Consulting, Somerville, MA

As an offsite contract consultant, implemented web applications for clients using the Catalyst framework in Perl, along with MySQL, Template Toolkit, FormFu, and jQuery.

- For Tufts University Digital Collections & Archives, helped design and implement TAPER, a web tool for managing XML accession requests, and CIDER, a web tool for managing hierarchical collections.
- For Maine Historical Society, helped implement various pages on their public-facing website for displaying and managing databases of archival records.
- For various other clients, helped implement web-based applications for managing databases.

### **Jul. 2010–Sep. 2010** Art+Culture Editions, New York, NY

As an offsite contract consultant, helped implement an e-commerce web application with Ruby on Rails and Spree.

### **Jan. 2005–Nov. 2007** Gensym Corporation, Burlington, MA

Member of the G2 Core development team. Maintained and added features to a 20-year-old codebase of over one million lines of Common Lisp. Designed and implemented client and server libraries for HTTP, SOAP, WSDL. Helped implement the G2 Graphical Language, based on WS-BPEL.

### **1996–2003** Research assistant, Northeastern University, Boston, MA

Member of Dr. Karl Lieberherr's Demeter research team. Designed, implemented, and maintained DemeterJ, an extension to the Java language for adaptive programming (an early form of aspect-oriented programming). Later, took over development of DJ (Demeter in pure Java) and DAJ (Demeter for AspectJ) from MS student projects.

### **1992–1995** Software developer, Pure Software, Sunnyvale, CA

Member of the development team for Purify, a memory corruption and leak detection tool for C/C++ programs in Solaris. Worked on the reporting back-end, GUI, and common library code for Purify, PureLink, and Pure-Coverage products.

## Education

**1995–2005** Ph.D. Computer Science, Northeastern University, Boston, MA

Designed and implemented the Socrates programming language (embedded in PLT Scheme), which unifies and generalizes object-oriented and aspect-oriented programming language mechanisms for separation of concerns using predicate dispatching and open classes.

**1988–1992** B.A. Computer Science, University of California, Berkeley, CA

Member of the eXperimental Computing Facility (XCF). Re-implemented the Berkeley Logo interpreter as an explicit-control evaluator rather than a meta-circular evaluator.

## Other Projects

**2011** Last Day of Summer

Designed, wrote, and implemented an interactive fiction game for the 2011 IF Competition using Inform 7. It placed 25th out of 38 entries—not bad for a first-timer competing against many experienced IF authors! It was part of a four-game metapuzzle that won the XYZZY Award for Best Individual Puzzle.

**2009–2010** Chugchanga-L Poll

Designed and implemented an Ajax application in Python, hosted on Google App Engine, to allow members of Chugchanga-L (a music discussion mailing list) to vote for their favorite music releases of the year. It uses the MusicBrainz XML web service to canonicalize votes by matching them to releases in the MusicBrainz database.

**2006–2010** Volity Games Network

Helped implement the Volity platform for multi-player online board games. Implemented a Jabber-RPC library in Java, and helped develop Gamut, the standalone SVG client Java application. Implemented a server (“parlor”) for a board game of my own design, Pylon, in Python. Took over maintenance and development of the Volity web client.