

Brian Chapados

Objective-C / iPhone, Ruby developer

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- 4 years programming in Objective-C and Ruby, including 2 years of iPhone development
- Active contributor to open source Objective-C and Ruby projects since 2007
- 5 years experience training and managing small teams of researchers
- 10 years experience writing, publishing and illustrating technical research articles and government funded grant applications

Work Experience

Wildcard Network Inc. (Independent Developer, 2009-2010)

A startup focusing on mobile gift cards.

<http://tinyurl.com/wildcard-appstore>

- Developed Wildcard iPhone app with a team of 6 including a designer, server engineers and business executives.
- Acted as the technical lead for the project, integrating development and business objectives.
- Developed automated tests for core data models and user sign-up procedures.
- Developed a small web app (Ruby on Rails + Sinatra) for managing card images on Amazon S3 for fast delivery via CloudFront.
- Implemented in-app purchasing for buying gift cards: the core revenue model for app.

Open Source Contributions

Cocoagit (co-maintainer 2008-2009)

Objective-C library for accessing git version control repositories from OSX and iPhone applications.

<http://github.com/chapados/cocoagit>

- Implemented parsers for raw git objects, and binary PACK format files and indexes.
- Developed API for reading/sorting/walking through the commit history of a repository.
- Implemented network functions using CFNetwork to transfer data using the git protocol.
- Integrated automated unit tests that run in Xcode or from the command line.

Three20 (contributor 2010)

Three20 is a collection of iPhone UI classes and general utilities.

- Fixed Three20 View Controller classes to be compatible with NIB files for use with Interface Builder.

<http://github.com/chapados/three20/tree/nib-support>

Grit (contributor 2009)

Grit is a Ruby library for extracting information from a git repository used by GitHub.

- Made Grit compatible with Ruby 1.9, while still maintaining backwards compatibility with Ruby 1.8.6., providing an ~10-20% performance increase. <http://github.com/chapados/grit/commits/ruby19>

Nu (contributor 2007-2008)

Nu is a Lisp-ish programming language implemented on top of the Objective-C runtime.

- Developed methods for sorting lists and arrays using Nu blocks (closures).
- Added new mathematical operators for exponentiation logarithms and rounding.

Scientific Software

As a Postdoctoral Fellow at Lawrence Berkeley National Labs, I developed software as part of my research projects in biophysics, genomics and cell biology.

CellFinder (2007-2009)

Mac OSX application for graphing, visualizing and analyzing results from high-content imaging experiments.

- Implemented methods to import data into binary arrays for efficient processing of moderate-large datasets.
- Developed a layout manager to dynamically group scatter plots and histograms into categories.
- Implemented an image browser using Core Image to perform real-time image cropping of individual cells corresponding to selected sets of measurements.

DeltaVisionImporter (2009)

A Spotlight plugin to search comment fields of proprietary DeltaVision (TM) microscopy image files.

<http://github.com/chapados/deltavision-spotlight>

- Reverse engineered image header to extract comment data in a byte-order independent manner.

Scrimp (Scripable Image Processor; 2007)

A specialized build system for format conversion and analysis of fluorescence microscopy images.

- Implemented JRuby and rake tasks for converting between image formats.
- Developed JRuby scripts to batch process images using existing Java-based ImageJ plugins.
- Integrated table format summaries of image quantitation results for further analysis.

Education

- PhD, Structural Biology, 2005, The Scripps Research Institute
- BS, Recombinant Gene Technology, minor in Chemistry, 1999, SUNY Fredonia

Specialized Skills

- Objective-C (Mac OS X, iPhone, iPad); Ruby; C
- Linux, Solaris, Mac OS X system administration
- SQL, MySQL/Postgresql database configuration
- Technical writing: scientific grants/papers, protocols, how-to articles