

# James E. Keenan

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## **CORE STRENGTHS:**

- Expert-level software developer with specialties in Perl, SQL and shell.
- Open source contributor:
  - Comprehensive Perl Archive Network (CPAN)
  - FreeBSD and OpenBSD ports
- Advocate and practitioner of the integration of development and testing.
- Author of quality software documentation.
- Experienced open-source project organizer.
- Experienced collaborator with product managers and project managers.

## **PROFESSIONAL EXPERIENCE (Information Technology):**

- Perl 5 Porters: August 2012 – Present. Member of team responsible for ongoing development of Perl 5 programming language. First responder to issue tickets. Developer of technology to assess impact of changes in code base on most widely used CPAN libraries. Participant in Perl 5 Core Developer Summit.
- MediaMath: (<http://www.mediamath.com>) Software Developer, II, July 2012 – June 2016. Team has responsibility for supporting an API and database with which customers create and maintain digital marketing campaigns. Major projects have included:
  - Development of APIs by which clients create new campaigns and strategies starting from characteristics of existing ones.
  - Consolidation of older, disparate APIs for association of contextual targeting with strategies.
  - Implementation of API to enable clients to budget campaigns into individual segments based on impressions served as well as monetary spend.

Technology stack for the above was: PostgreSQL 9.4 database; Perl 5 (object-oriented and functional); Catalyst web framework; Rose::DB as object-relational mapper. Other projects also used shell scripts and DBIx::Class.

- Experian Cheetahmail: (<http://cheetahmail.com>) Senior Software Developer, Client Solutions, April 2006 – July 2012. Team has responsibility for evaluating and implementing custom solutions to client needs. Individual responsibilities include:
  - Authoring programs (a) extracting and transforming data from client-supplied files in preparation for loading to database interfaces; and (b) preparing custom reports on client database and mailing activity.

- Creating libraries providing both client-specific and cross-client backend functionality.
- Mentoring newer developers in both software development best practices and employer-specific interfaces.
- Working with business-side technical staff to formulate project requirements and to test and install projects.
- International Knowledge Measurement: (<http://ikmnet.com>) Consultant, Quality Assurance for online Perl 5 examination, January 2012 – March 2012.

### **OPEN SOURCE SOFTWARE CONTRIBUTIONS:**

Author and/or maintainer of 15 extensions to the Perl programming language currently available on CPAN (<http://search.cpan.org/~jkeenan>). Of these, the most significant are:

- List::Compare: (<http://search.cpan.org/dist/List-Compare/>) Object-oriented Perl module in which user passes references to two or more lists to constructor and receives as output lists intersection, union, symmetric difference, subset relationships, etc. Subsequently extended to include functional interface. Depended on by 15 other CPAN distributions (<http://deps.cpanesters.org/depended-on-by.pl?dist=List-Compare>).
- ExtUtils::ModuleMaker: (<http://search.cpan.org/dist/ExtUtils-ModuleMaker>) Assumed maintenance of CPAN distribution which provides user with a CPAN-ready directory and file structure for writing Perl modules. As maintainer, simplified internals, extended functionality to include saving of personal default values, expanded test coverage of this module and extended applicability of accompanying command-line utility *modulemaker*.
- Parse::Taxonomy: (<http://search.cpan.org/dist/Parse-Taxonomy/>) Object-oriented Perl module which enables user to validate the hierarchical structure of data submitted in CSV format and to transform taxonomies by materialized path and by adjacent list into one another.
- Devel::Git::MultiBisect: (<http://search.cpan.org/dist/Devel-Git-MultiBisect/>) Object-oriented Perl module which enables user to easily bisect a large range of git commits with respect to changes in test output – not just changes in pass/fail.

### **OPEN SOURCE COMMUNITY ACTIVITIES AND LEADERSHIP:**

- White Camel Award: Perl community's highest award for contributions to the community other than code. Awarded June 15, 2012 at Yet Another Perl Conference::North America.
- Perl 5 Porters: 2010 – 2011: Conducted extensive refactoring and testing of Perl 5 core module ExtUtils::ParseXS. 2012 – present: Committer to Perl 5 source repository, with special focus on monitoring of Perl 5 issue queue (<http://rt.perl.org>).
- Perl Seminar New York: (<http://groups.yahoo.com/group/perlsemny/>) Founder and co-moderator (December 2000 – May 2011) of Perl user group affiliated with New York Perlmongers and NYPC Users Group. Founded in December 2000, group sponsored meetings eight months per year in which programmers from advanced beginner to expert levels present and applications in Perl and other open-source technologies.

## **PROFESSIONAL EXPERIENCE (Non-Information Technology)**

Prior to working in software development positions, worked in line, supervisory and management positions at the New York State Office of Mental Health (1996 – 2006). Pioneered use of dynamic programming languages for work in admissions, census management, treatment programming and discharge planning.

## **TEACHING, PROFESSIONAL PUBLICATIONS AND PRESENTATIONS:**

- Perl Programming Fundamentals: New School University, Computer Instruction Center, New York, NY. Taught a 6-session, 14-hour course, in the Spring 2002, Fall 2002 and Spring 2003 semesters.
- An Index of Incivility in the Perl Community: Yet Another Perl Conference::North America, McGill University, Montreal, Quebec, June 2001 (<http://prometheus.frii.com/~gnat/yapc/mp3/2001-lightning-james-keenan.mp3>).
- Variations on a Theme: Repeated Code Is a Mistake: Yet Another Perl Conference::Canada, Carleton University, Ottawa, Ontario, May 2003 (<http://thenceforward.net/perl/yapc/YAPC-CA-2003/Repeated-Code-Is-a-Mistake.pdf>).
- List::Compare: Determining List Relationships with Perl: *The Perl Journal*, May 2004 online issue (<http://www.tpj.com/archives/2004/0405/>). and Yet Another Perl Conference::North America, University at Buffalo, Buffalo, New York, June 2004. (<http://thenceforward.net/perl/yapc/YAPC-NA-2004/List-Compare/List-Compare.pdf>)
- Mail::Digest::Tools: Tools for Subscribers to Digest Versions of Mailing Lists: Yet Another Perl Conference::North America, University at Buffalo, Buffalo, New York, June 2004. ([http://thenceforward.net/perl/yapc/YAPC-NA-2004/Mail-Digest-Tools/slides/slide\\_001.html](http://thenceforward.net/perl/yapc/YAPC-NA-2004/Mail-Digest-Tools/slides/slide_001.html))
- Building a CPAN-Ready Extension: New Orleans Perlmongers, December 2004.
- A Primer on Coverage Analysis and Devel::Cover: Perl Seminar NY, December 2004.
- Phalanx from the Trenches: A Local Perl Users Group's Experience: With Marc Prewitt, Yet Another Perl Conference::North America, Toronto, Ontario, June 2005 (<http://hew.ca/yapc/phalanx/slides/index.html>).
- Two or Three Things I Learned about Maintaining CPAN Modules: Toronto Perlmongers, Toronto, Ontario, October 2005 (<http://thenceforward.net/perl/modules/ExtUtils-ModuleMaker/Toronto.Perlmongers.10.27.2005.html>); Yet Another Perl Conference::North America, Chicago, June 2006 (<http://thenceforward.net/perl/yapc/YAPC-NA-2006/chicago.html>)
- How to Get the Most out of a Hackathon: Yet Another Perl Conference, North America, 2007, Houston.
- Component-Focused Testing: The Case of the Parrot Build Tools: Yet Another Perl Conference::North America, Houston, June 2007 (<http://thenceforward.net/perl/yapc/YAPC-NA-2007/component-focused-testing/index.html>)
- Coverage Analysis in Perl 5 Software Development: Pittsburgh Perl Workshop, October 2007 (<http://thenceforward.net/perl/talks/ppw2007.tgz>).

- Refactoring Ancient Code: The Case of ExtUtils::ParseXS: Yet Another Perl Conference, North America, 2010, Columbus, Ohio (<http://thenceforward.net/perl/yapc/YAPC-NA-2010/hackingeupxs.odt>).
- Making Sense of 'make': Perl Seminar New York, January 2011 ([http://thenceforward.net/perl/talks/making\\_sense\\_of\\_make.tar.gz](http://thenceforward.net/perl/talks/making_sense_of_make.tar.gz)).
- Eighty-Two Percent of What You Need to be a Competent Perl Tester: DC-Baltimore Perl Workshop, April 2012 and Yet Another Perl Conference::North America::2012, June 2012 ([http://thenceforward.net/perl/yapc/YAPC-NA-2012/eightytwopercent\\_of\\_perl\\_testing.html](http://thenceforward.net/perl/yapc/YAPC-NA-2012/eightytwopercent_of_perl_testing.html)).
- A Development Tool for Improving Library Code: Yet Another Perl Conference, North America, 2015, Salt Lake City, Utah. (<http://thenceforward.net/perl/yapc/YAPC-NA-2015/slides/>)
- A Taste of Taxonomies: DC-Baltimore Perl Workshop, April 2016 and The Perl Conference, June 2016, Orlando, Florida. ([http://thenceforward.net/perl/yapc/YAPC-NA-2016/a\\_taste\\_of\\_taxonomies\\_yapcna\\_2016.pdf](http://thenceforward.net/perl/yapc/YAPC-NA-2016/a_taste_of_taxonomies_yapcna_2016.pdf))
- Perl and the Art Market in a Time of Historical Turmoil (<https://culturedperl.com/perl-and-the-art-market-in-a-time-of-historical-turmoil-35a287171b6f#.4j5rir50v>)
- Gun Violence: Using Perl to Analyze Publicly Available Data (<https://culturedperl.com/gun-violence-using-perl-to-analyze-publicly-available-data-4697b6d7dc1f#.i3nkp3g2p>)
- How Do We Assess and Maintain the Health of the Perl 5 Codebase, The Perl Conference, June 2017, Alexandria, Virginia. (<http://thenceforward.net/perl/tpc/TPC-NA-2017/p5-codebase-health.pdf>)
- Time of Check to Time of Use: File-Path Security: History and Current Status, Philadelphia Perlmongers, September 2017, Philadelphia, Pennsylvania. (<http://thenceforward.net/perl/talks/phlpm20170911/slides/>)
- Discussion leader, Perl 5 Core Hackathon, Amsterdam, Netherlands, October 2017.

## **OTHER INFORMATION TECHNOLOGY:**

### **Knowledge Base:**

- Operating Systems Used: Linux (Debian, Ubuntu, Red Hat), Windows, Macintosh (Darwin), FreeBSD, OpenBSD, DOS, OS/2.
- Version Control Systems: CVS, Subversion, Git.
- Virtualization Technologies: VMWare, VirtualBox, Vagrant.
- Other Technologies, Languages and Programs: Apache 2.0, ProFTPD, HTML, C++, Javascript, CGI, DOS Shell, BASH Shell, MySQL, SQLite, Python.

### **Education and Languages:**

Hunter College School of Social Work: M.S.W.

New School for Social Research: M.A., Economics.

State University of New York at Buffalo: B.A., History.

Foreign Languages: Moderate fluency: Spanish, French. Also studied: Dutch, Portuguese.