

Bill Rishel

*365 America Ave.
Sunnyvale, CA 94085
408-499-2519 (cell)
billrishel2@gmail.com*

Software Engineer

Objective

Seeking opportunity on collaborative project involving a rich technical ecosystem, and calling for bold, creative solutions.

Project Portfolio

Summary

A selection of projects demonstrating fresh, original work in analysis, design, and implementation.

Metapath

Metapath a developer of large Oracle business analysis systems for telecommunications companies.

Developed Construction Markup Language (CML), a code generation language, that enabled the project team to produce in one afternoon code that had formerly taken two weeks to create manually. CML covered 80% of development needs. Several years after deployment CML was still in active use and had been reapplied by engineers to an entirely different project.

CML implemented in XSLT. Rights to CML licensed to Metapath by Rishel.

Designed and implemented a code generation system to produce C++ object-relational mapping classes for an Oracle data warehouse system. Implemented in Perl.

DataScaler

DataScaler is a developer of a distributed in-memory SQL database. Acquired by Oracle in 2010.

Designed and prototyped a data load balancing algorithm for the storage engine of a distributed SQL database. Prototype implemented in Python. Rishel is the inventor in a patent application for the load-balancing algorithm.

Designed and implemented a multi-core sort algorithm in C++ and employing the Boost Library.

Designed and implemented a clique analysis algorithm for analyzing large social network graphs. Implemented in C++ and with the Boost Library.

X2Infinity

A small start-up web development company.

Designed and implemented a web framework in Java employing a data inheritance model where web pages inherit parent page specifications with ability to override. Unlike typical web frameworks, code is inserted as nodes within the specification framework, providing a clean separation of concerns for designers and developers.

Education

University of Arizona, Tucson, Arizona

BA in Mathematics; minors in Psychology, Art, and Philosophy

Languages and Operating Systems

Languages

In order of experience: Python, C/C++, Java, XSLT, Perl

Operating Systems

Linux, Windows

Work History

DataScaler, Mountain View, CA

Software Consultant, 2007 to 2010

DataScaler is a developer of a distributed in-memory SQL database. Acquired by Oracle in 2010.

Designed and prototyped a data load balancing algorithm for a distributed in-memory SQL database. Prototype implemented in Python. Rishel is the inventor in a patent application for the load-balancing algorithm. Designed a multi-core sort algorithm implemented in C++ and employing the Boost Library. Designed and implemented a clique analysis algorithm for analyzing large social networks. Implemented in C++ and with the Boost Library.

X2Infinity Inc., Campbell, CA

Software Architect and Developer, September 2000 to 2003

Website development. Specializing in creation of collaborative, content management, and workflow environments. Sites architected for easy configuration and low-tech access to content management features. Development of Easy Layout Language (ELL), an XML-based language that allows complete separation of content and rendering in web page definitions.

MSI (MetaPath Software International), Inc., Bellevue, Washington

Software Architectural Consultant, December 1999 to October 2000

Conceived, designed and implemented code generation system for high performance data warehouse product capable of handling 100 million records (Ceer). Developed system generates Oracle schema files, PKG files, shell scripts, and proprietary MSI files. Per an internal MSI whitepaper on this system, "... this methodology covers approximately 80% of new development needs." This system is an extensible architecture for parameterized database dimensions. New data warehouse dimensions can be added in a *fully declarative manner* by specifying schema, process, and configuration characteristics in an XML definition file. All code generation is defined in CML (Construction Markup Language), a general purpose code generation language designed and implemented by Rishel. The XML

technology for this project is proprietary to Rishel and licensed to MSI under a contractual agreement between MSI and Rishel. CML is a simple yet remarkably powerful language that has been readily mastered by the Ceer staff, enabling the Ceer team to extend the code generation architecture.

MSI (MetaPath Software International), Inc., Bellevue, Washington

Software Engineering Consultant, June to November 1999

C++ mentor and architectural advisor to Cerve team architect. Provided assistance to architect in terms of C++ expertise and architectural solutions. Developed generic C++ code generator in OO Perl where object model infrastructure classes are automatically derived from Oracle schema files. Code generation is built into make-system such that revision of database schema evokes automatic update of object model infrastructure class files.

Microsoft, Redmond, Washington

Software Engineering Consultant, October 1998 to May 1999

Software development for WindowsCE Palm PC (P/PC) products. C/C++ in Win32 environment, including development of reusable classes and modules in an environment emphasizing performance and code size, as well as utility scripts in Perl. Experience developing for multiple miniature hardware devices utilizing diverse processors.

Boeing Commercial Airplane Group, Seattle, Washington

Software Engineering Consultant, July 1997 to July 1998

Provided infrastructure support for system that distributes airplane modeling data to Boeing designers throughout Puget Sound area. Due to enormous complexity of system (over 200 interacting shell scripts and C programs!), and lack of modularity, proposed an automation of testing so developers could improve system without fear of serious production impacts. Designed and implemented (in Perl) a fully automated testing architecture based on decoupled, late-binding "evaluator" and test case objects that can be added/removed at runtime. Testing architecture built upon innovative lower layer architecture utilizing flexible, programmable filters (in Unix sense) for processing rudimentary "file objects" such as lists and maps.

Mental Health Counselor From 2003 to 2007 and from 2010 to 2013 worked as a mental health counselor for Chamberlains' Children Center in Hollister, CA, Alliance for Community Care, and Momentum for Mental Health in San Jose, CA.