

J. Christopher Bare

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Summary

Software Engineer with 17 years professional experience in the design and implementation of software for the web and desktop. Strong logical, analytical, and problem-solving skills. Quick and enthusiastic learner. Proficient in software design, refactoring, and modern development practices.

Java, Ruby, Ruby on Rails, Python, R, JavaScript, HTML, CSS, SQL, bioinformatics, messaging, relational database design, object-oriented design patterns, revision control, unit testing, Scheme, 6502 assembler.

Professional Experience

Jun. 2006 - Present

Institute for Systems Biology, Seattle, WA
Software Engineer

- Maintained and extended Gaggle, an interoperability framework for bioinformatics applications based on messaging. Java, RMI, R.
- Created the Gaggle Genome Browser, an interactive visualization of high-throughput data plotted against the genome featuring integration with the R statistical computing environment and a highly flexible data model. Java, Swing, SQLite, R.
- Implemented Firegoose, an extension for the Firefox browser enabling data exchange between desktop applications and web resources. Javascript, Java, Web services, Microformats.
- Developed community resources (web site, mailing lists, wiki, screencasts) for developers of open source bioinformatics software connected to the Gaggle framework.
- Wrote and published manuscripts, assisted in preparing grant applications and progress reports.
- Wrote documentation and build scripts and managed source code repository.
- Designed tiling array probe sets and curated scientific data.
- Assisted in management of outsourced development project.

Aug. 2002 - Mar. 2006

Software Developer, contract and freelance

- At **Expedia**, developed business-to-business integration (EAI) using Java, web services, XML, and XSLT.
- At **Tenzing/OnAir**, performed code review prior to merger. Java/J2EE.
- At **Amgen**, developed a rich client application enabling researchers to define experimental protocols using a controlled vocabulary. Java/J2EE.
- Wrote documentation, unit tests, and build scripts.

Sept. 2000 - Aug. 2002

PeopleLink, Santa Monica, CA
Senior Software Developer

- Served as Technical Lead, mentored junior developers, and assisted Project Managers with requirements, specifications, and scheduling.

- Refactored existing software to Model-View-Controller architecture increasing maintainability and cleanly separating domain logic and display concerns.
- Architected, designed, and coded online community applications in Java using JSPs, JDBC, SQL and XML.
- Co-wrote a data abstraction layer to support multiple database engines (Oracle and DB2).
- Wrote documentation, unit tests, load tests, and build scripts and managed source code repository.

Jan. 2000 - Jun. 2000

Ingenuity Systems, Mountain View, CA
Software Developer

- Contributed to team developing web applications in Java featuring a functional genomics knowledge base.
- Developed cross-browser UI elements using HTML, JavaScript, Java Applets, and CSS.
- Implemented white box unit test cases in Java.

Jun. 1999 - Dec. 1999

Business Data Services / Tallan, Costa Mesa, CA
Senior Consultant

- Developed e-commerce web applications using ASP, SQL Server, Java, and Javascript.

Jun. 1998 - Mar. 1999

Around-the-world travel

- Traveled to Spain, France, Italy, Greece, Turkey, Egypt, Thailand, Malaysia, Singapore, Australia, Fiji, Hawaii, and California.

Aug. 1995 - Jun. 1998

Merck & Company, West Point, PA
Computer Programmer

- Wrote multimedia, client-server, and database applications using Visual Basic, C, and C++, deployed in Merck's sales force, at trade shows, and internally.
- Wrote a multimedia testing engine for sales training with web application for reporting test results and statistics.

Sept. 1994 - May 1995

Pennsylvania State University, University Park, PA
Computer Programmer / Research Assistant

- Wrote neural network simulation in C++.
- Prepared graphs and data analysis using Mathematica.
- Performed biological sequence analysis using BLAST and ClustalV.
- Wrote programs for data smoothing, curve fitting, and translating gene sequence file formats.

Oct. 1992 - Jun. 1994

Hahnemann University Hospital, Philadelphia, PA
Computer Programmer / Assistant System Administrator

- Assisted in maintenance and programming of a medical research database using Ingres 4GL.

Education

Jun. 2004 - Jun. 2007

University of Washington, Seattle, WA
M.S., Computer Science & Engineering

- Coursework in Mathematics, AI, Transaction processing, Algorithms, Compilers, Programming Languages, Cryptography, Computational Biology, and Data mining.

Jun. 1989 - Aug. 1992

Pennsylvania State University, University Park, PA
B.S., Mathematical Science, Minor Computer Science

- Additional coursework in Biology and Economics.

Publications

Integration and visualization of systems biology data in context of the genome.

Bare et al., BMC Bioinformatics, Jul. 2010

Prevalence of transcription promoters within archaeal operons and coding sequences.

Koide et al., Molecular Systems Biology, May 2009

A predictive model for transcriptional control of physiology in a free living cell.

Bonneau et al., Cell, Dec. 2007

The Firegoose: two-way integration of diverse data from different bioinformatics web resources with desktop applications.

Bare et al., BMC Bioinformatics, Nov. 2007