William C. Benton

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willb

Skills

Excellent oral and written communication skills. Recognized as an outstanding teacher, lecturer, and speaker. Nearly two decades of success working remotely and with distributed teams.

Languages — Professional expertise with C, C++, Erlang, Java, JVM bytecode, Prolog, Python, R, Ruby, Scala, and SQL; familiarity with many other languages and environments.

Techniques — UNIX systems programming, concurrent programming, distributed systems, machine learning, binary instrumentation, static analysis design, compiler and virtual machine implementation, logic programming system implementation, functional languages, and REST web services.

Select Professional Experience

October 2016–present — **Senior Principal Software Engineer**, *Red Hat, Inc.*, Middleware.

April 2015– — **Principal Software Engineer**, *Red Hat, Inc.*, Emerging Technology & Middleware.

September 2008 – — **Senior Software Engineer**, *Red Hat, Inc.*, Emerging Technology & Enterprise MRG.
Led a data science team focused on consulting for internal customers. Contributed to the successes of several open-source distributed computing communities. Developed enhancements and fixes for many projects including Apache Spark, the SBT build tool, and the HTCondor job scheduling system. Designed and implemented open-source projects including SPQR, a framework for distributed applications in Ruby; *Capricious*, a family of pseudorandom number generators; *Wallaby* and *Wallaroo*, two sophisticated configuration management services; and *Silex*, extensions to the Spark library for real-world data science. Packaged open-source software. Mentored new contributors to the Fedora Project.

Summer 2003 – Fall 2008 — **Research Assistant**, *University of Wisconsin*, Computer Sciences.
Supervised by Prof. Charles Fischer. Analyzed performance impact of high-level language features. Developed novel program analyses and transformations for Java. Designed and implemented a logic programming environment for program analysis. Developed runtime support for opportunistic parallelism in a Java virtual machine.

Summer 2005 – Fall 2007 — **Teaching Assistant/Lecturer**, *University of Wisconsin*, Computer Sciences.
Lectured and developed course materials, including slides, handouts, and programming projects, for introductory and senior-level computer science courses. Awarded departmental teaching honors in 2006 and university-wide teaching honors in 2007.

October 2005 – April 2006 — **Independent Consultant**.
Retained by an Australian music-technology startup to refine a novel audio synthesis technique.

Fall 2000 – Spring 2003 — **Research Assistant**, *University of Wisconsin*, Computer Sciences.
Supervised by Prof. Barton Miller. Assisted with development and maintenance of the Paradyn parallel performance analysis tool and the Dyninst dynamic instrumentation library.

Summer 2000 — **Consultant**, *Devon Consulting, Wayne, PA*.
Implemented a dynamic document management system that used Java, JDBC, Oracle, and DCOM to parse and publish semi-structured natural-language experiment reports.

Education

2008 — **PhD (computer sciences)**, *University of Wisconsin–Madison*.
Dissertation title: *Fast, Effective Program Analysis for Object-Level Parallelism*.
Advised by Prof. Charles Fischer.

2000 — **BA with honors (philosophy, music, computer science)**, *St. Olaf College*.