WILLIAM F. GILREATH

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Summary

I am a multifaceted software engineer, web developer, and computer scientist. I love working with software especially developing, testing, writing, and analyzing code. In my spare time, I write both code, technical papers, and narrative prose.

Experience

Web Content Editor/Writer, Hummingbird Innovations — Happy Valley, OR
September 2019-currently
- Research material from various online sources articles, blogs, books, research papers.
- Author content in Wordpress template and edit content, template for best quality.
- Resolve any content issues or web issues in accessing and viewing content.

Unemployed/Free Agent — Salem, OR
July 2019-September 2019
I'm a software engineer, so while a free agent I worked on some projects. Three open-source projects I have created on my own are:

- WEJAC - simpler Java compiler. https://wgilreath.github.io/WEJAC/
- DBXShell - DropBox shell to manage DropBox storage. https://wgilreath.github.io/DBXShell/
- ZeptoN - ZepC transcompiler in Java for ZeptoN language. https://github.com/wgilreath/ZeptoN

Technical Contributor/Review Editor, Packt Publications — Mumbai, India (remote work)
January 2019-July 2019
- Technical Contributor "Java Data Structures and Algorithms" lesson technical assessment questions.
- Technical Contributor "Java Fundamentals" pre- and post-assessment technical assessment questions.
- Technical Contributor "Java Fundamentals" lesson 1 and 2 follow-up technical assessment questions.
- Review Editor "Professional Javascript" checking, evaluation, and testing of technical content and source code.

Program Member/Volunteer, Union Gospel Mission — Salem, OR
September 2015-September 2018
I became homeless thus lived at the Union Gospel Mission, in a program to get back on my feet. I graduated from this program, so am now an active job seeker. I volunteered in computer support:

- Graduate of the New Life Fellowship (NLF) program to recover from homelessness.
- Computer support for front-desk, computer laboratory, staff computers.
- Developed web app to e-mail evaluations from form to staff.
- Created documents, spreadsheets used by staff in Microsoft Office.

Freelance Software Developer — Picayune, MS
November 2006-May 2014
I was my mother's caregiver during her declining years until her death. On the side, I worked software gigs, and odd programming jobs through word of mouth, sologig, etc.

- Worked on small software projects, gig to gig; unemployed between gigs.
- Porting legacy code to more modern languages such as FORTRAN, Pascal to Java, C#.
- Implementing custom programs, tools, and utilities for the macOS, Windows, Linux.

Software/Database Engineer, Planning Systems, Inc. — Stennis Space Center, MS
June 2006-November 2006
- Administration of information on MySQL database of sensor/buoy data on Linux server system.
- Developed Java application library for database management utilizing JDBC database driver.
- Wrote data population application with Java and shell scripts to import and export raw data from the database system.
- Assisted in improvement and verification of documentation presented on the intranet used by other scientists and software developers.
- Consulted in the development of a XML-based message software service project in Java.

Independent Technical Author, Kluwer/Springer-Verlag — Picayune, MS
March 2002-February 2003
- Lead author on computer architecture book, with Dr. Phillip A. Laplante, "Computer Architecture: A Minimalist Perspective," published March 2003.
- Researched the technical material relating to computer architecture and engineering for the text.
- Created tables, diagrams, and visual aids for book chapters illustrating concepts and principles relating to computer architecture.
- Developed chapter questions and exercises as means to assess level of understanding and comprehension of material.
- Created example programs in C programming language, assembly language to demonstrate computer architecture principles.

Java Consultant/Developer, J.R. Simplot Company — Boise, ID
February 2002-June 2002
- Mentored software engineers by hands-on training with Java and the object-oriented paradigm.
- Rewrote and translated existing code to Java for several in house applications.
- Developed in conjunction with other developers a Java applet for interactive data visualization.
- Authored reference documentation for training and education with Java and the object-oriented paradigm using UML.

Firmware/Software Developer, Hewlett Packard/Adecco Technical — Boise, ID
March 2001-February 2002
- Install/webmaster of Apache Tomcat web server usage and development of internal web apps, tools, and utilities.
- Build printer firmware and debug failed builds on a distributed build system using C/C++.
- Investigate and assist in debugging scripts, utilities, and tools in C/C++, UNIX shell, Perl script, and JavaScript.
- Worked and developed embedded C source as part of printer firmware development kit.
- Development of HTML forms, web pages, CGI scripts, JavaScript libraries for web apps and tools.
- Maintenance, testing of software document and development tools in C/C++ in UNIX.
- Provided support for libraries and scripts for distributed build system.

Software Engineer, Micron Technology — Boise, ID
June 1999-November 2000
- Developer for manufacturing data communication system and internal middleware library using TCP/IP and UDP protocols in C++ for Unix/Windows.
- Developed and assisted in database development on Oracle, Sybase in PL/SQL and Transact SQL.
- Code maintenance, revision and support for existing legacy software in C/C++ on Windows, UNIX systems.
- Assisted in assessing and planning requirements for application programming interfaces relating to SOAP and XML based software.
- Developed regression test suites for software applications and utilities in C++ using distributed middleware messaging.
- Instructor for introductory training class for XML and application library in C++.

Lead Research Assistant, Computer Science Dept, Mississippi State — Starkville, MS
July 1996-December 1996
- Leader for research project with professor in machine learning project for military application.
- Developed, tested, and maintained C/C++ code for machine learning app.
- Modified source code for Improvements in runtime performance, memory usage, and removal leaks.
- Ported source code from SunOS/Unix engineering workstation to Linux on PC.
- Coordinate research efforts with other researchers and reported to professor.

Engineer Intern/Coop Student, South Mississippi Electric Power Association — Purvis MS
August 1991-May 1994
- Investigated alternative equipment, hardware for new replacement systems in plant equipment.
- Tested new work order/equipment schedule and tracking system.
- Edited user manual explaining use of new work order/equipment schedule system in Oracle.
- Trained and assisted users of new UNIX-based distributed control system.

Education
- Mississippi State University, Starkville, MS — Bachelor's of Computer Science, 1998.

External Links
- LinkedIn: https://www.linkedin.com/in/wfgilreath/
- GitHub: https://github.com/wgilreath
- Home: https://wgilreath.github.io/WillHome.html

Skills

Java	Eclipse	SQL	MacOS	Apache Tomcat	Git/GitHub	FORTRAN	ClearCase	Middleware Tibco/ Talarian
C/C++	Netbeans	PL/SQL	Linux	Apache webserver/ HTTP	Python	Technical Writing	MySQL	Oracle
Shell Scripting	Visual Studio/Code	T/SQL	Windows	XML/SOAP	IntelliJ	LISP	Sybase	Python
C#	XCode	CVS	SVN	JSON	Pascal			

Publications

- "The Problem with Creating Generic Arrays," Java Code Geeks, October 2019.
  https://www.javacodegeeks.com/the-problem-with-creating-generic-arrays.html

- "The Two Couriers Problem A Problem of Division by Zero in Transmathematics," *Transmathematica Journal*, June 2019. https://transmathematica.org/index.php/journal/article/view/7

- "Instruction Set Completeness Theorem: Concept, Relevance, Proof, and Example for Processor Architecture," *General Science Journal*, March 2017.
  https://www.gsjournal.net/Science-Journals/Research%20Papers-Miscellaneous/Download/6855