# 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.

**WILLIAM F. Gilreath**

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* 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.

**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

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| 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