Jason C. McDonald

Software Developer | Author | Project Manager

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Expert in Python and C++, with experience in debugging, refactoring, software design, and advanced use of object-oriented and generic programming paradigms. Ubuntu power user, IT, and computer repair technician. Experienced project manager with a background in communication.

Selected Professional Experience

MousePaw Media [May 2010 - Present]
CEO, Lead Developer — Managing programming department, oversaw and developed open source libraries and software in C++ and Python.
- Hired and trained over a dozen interns during their year-long internship, many of whom are now employed full-time by other software development firms.
- Developed the internship program in direct cooperation with local universities.
- Deployed and maintained entire collaboration and CI/CD platform for working seamlessly with internationally distributed team and open source contributors.
- Designed and implemented Goldilocks, a C++ testing library for deploying and running tests and benchmarks without external harasses or tooling.
- Developed and published Commenting Showing Intent standard, the first formal commenting standard, which has saved the team many work hours associated with code handoffs.
- Developed and published Quantified Task Management standard, which streamlined our task management decision-making workflow.
- Designed and lead implementation of Flex, a set of C++ data structures with better performance than their identical standard library counterparts.

Author [January 2017 - Present]
Authored numerous articles on Python, C++, and project management, most of which are available on DEV.to.
- Wrote "Dead Simple Python" (No Starch Press), which introduces idiomatic Python to developers coming from other languages. Based on my popular article series of the same name on DEV.
- Under contract with No Starch Press for a book covering advanced debugging techniques.

EuroPython [April 2020 - Present]
Work Group Member (Volunteer) — Advised and assisted with transitioning the in-person conference plans to an online event. Trained speakers on online tooling and presentation procedure. Served as session manager to introduce talks and field Q&A.

DEV.to [December 2018 - Present]
Tag Moderator (Volunteer) — Enforce community rules and tag policies. Help promote excellent content. Resolve community conflicts diplomatically.
- Defined tag policies for several prominent tags, including #python, #opensource, and #beginners.
- Advised moderation policies and tooling, leading to improved moderator experience and productivity.

Washington State Opportunity Scholarship [September 2019 - April 2020]
Skills that Shine Mentor — Mentor WSOS students in professional development, resume and job interview skills, and professional networking.

Qub3d Project [February 2018 - May 2018]
Community Director — Coordinated open source development community for new project. Advised on project management. Designed and implemented initial development workflow. Moderated community. (Owners ended project for personal reasons unrelated to project.)

Technical Skills

C and C++: Applying advanced C++14/17 and classic C and C++ principles to design libraries and implement features with efficient, memory-safe code. Diagnosing and debugging difficult errors, especially undefined behavior. Code refactoring and modernization, memory management, algorithmic efficiency, and advanced debugging techniques.

Python: Experience implementing desktop applications using Python (2.7, 3.x) alongside various GUI libraries, including PyGObject (GTK), Kivy, and PySide2 (Qt5). Code refactoring and modernization.

Additional Programming: Deeply familiar with underlying principles, allowing rapid onboarding to any new language or framework. Skilled in Bash script development and use in production environments. Working proficiency with Java, Visual Basic .NET, SQL. Designed websites in pure HTML 5 and CSS 3. Prior expertise in ActionScript 3.0.

Servers: Configured and maintained public-facing, access-controlled LAMP servers from bare metal with Ubuntu Server, using latest best security practices; withstood eight-month distributed cyber attack. Implemented business-class email servers following latest best practices. Experience with Bash, Apache, MySQL, PHP, Git server, SSH, LDAP, Let's Encrypt, Postfix, Dovecot, multiple server applications. Wrote extensive public documentation on server deployment.

DevOps: Implemented entire DevOp stack and workflow for remote development team, using Git, Phabricator, Jenkins, Docker, Oracle VirtualBox, and GitHub. Designed organization-wide standardized build system using CMake, Makefiles, and multiple compilers, linters, and static analyzers. Documented best practices, maintained system.

Team and Project Managment: Organized multiple teams, developed and implemented standards, trained interns. Designed and managed administrative processes.

Hiring: Conducted remote and in-person interviews of local and international candidates for various development and non-development positions. Trained others in hiring techniques and best practices.

Technical Writing: Written documentation for libraries/APIs, DevOps processes and workflows, training material, and administrative policy documentation. Written multiple articles regarding software practices, project management, and software development. Author of "Dead Simple Python" (No Starch Press), based on series of the same name on DEV.

Public Speaking: Presented at prominent Python conferences, as well as at colleges, workforce training, and universities on software development and career advancement.

Education

North Idaho College [Non-Degree]: Interpersonal, intercultural, and non-verbal communication, public speaking, general psychology.
- 4.0 GPA, Dean's list.
- Recipient of Outstanding Student in Communication Department Award.

Portfolio: github.com/codemouse92

Articles: dev.to/codemouse92