

# Jason C. McDonald

Software Engineering Manager  
Business Analyst  
Author & Speaker

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Skilled communicator, facilitator, and software engineer seeking role as Engineering Manager, Business Analyst, Project Manager, or Director of Engineering.

## Selected Professional Experience

### **Principal Software Engineer | Sparq (formerly Rural Sourcing):** August 2022 – August 2023 (Full-Time)

Managed a team of 2-8 developers implementing a full-stack web application, functioning as both Tech Lead and Product Owner. Maintained backlog for scrum-based team. Elicited, validated, documented, and prioritized requirements. Communicated between developers and stakeholders. Worked with client, UX designer, and product strategist to design product from business requirements.

Advise clients on how to improve their software engineering best practices, and mentored developers. Implemented full DevOps CI/CD pipelines. Modernized existing code for an in-production ML/AI image processing pipeline, significantly improving performance, resilience, and maintainability. (Laid off.)

### **Lead Code Whisperer (Senior Software Engineer) | Corgibytes:** February 2022 – August 2022 (Full-Time)

Modernizing legacy code. Planned and implemented data migrations and API features for an in-production enterprise system.

### **Senior Software Engineer | Canonical:** June 2021 – February 2022 (Full-Time)

Maintained and developed Ubuntu cloud image delivery pipelines, tooling, and automation. Functioned as a primary point-of-contact for client cloud providers to communicate with engineering teams. Routinely acted as de-facto project manager. Resolved conflicts in stakeholder priorities and requirements.

Developed and owned roadmap and user stories for a project crossing multiple internal engineering teams, communicated with client cloud provider on project, ultimately enabling rollout of a feature to hundreds of thousands of enterprise customers.

Redesigned test framework for all Ubuntu cloud images, which is still in active use. Requirements were gathered from existing code and from discussions with various cloud image engineers.

Developed and wrote departmental policies to improve resilience and productivity of cloud images team. Assisted with policy roll out and getting buy-in from stakeholders and developers.

### **Lead Software Engineer | MousePaw Media:** May 2010 – Present (Volunteer, Full-Time 2010-2021)

Developed a robust year-long remote internship in collaboration with a few local universities; later expanded the internship to accept applicants globally. Managed and mentored teams of developers, mostly junior software engineers, working on game engine component libraries in C++. Served as product owner and project manager. Trained managers and DevOps.

Developed remote collaboration, training, and project management techniques, including Quantified Tasks and Commenting Showing Intent.

Most of our internship graduates have gone on to senior and management roles at software firms around the country.

### **Community Manager | Mailspring:** January 2021 – June 2021 (Volunteer, approx 20 hours/week)

Managed the open source community. Distilled over 1K open tickets on GitHub into a roadmap, and set up a new bug report and feature request pipeline. Elicit needs and requirements from different user groups in the community. Configure Discourse community, moderate discussion, and manage development tooling. Additionally, I contributed code in Typescript, Javascript, and C++.

## Selected Works

**"Dead Simple Python" (No Starch Press, 2022):** <https://nostarch.com/dead-simple-python>

A thorough introduction to every feature of the Python language for programmers who are impatient to write production code. Instead of revisiting elementary computer science topics, you'll dive deep into idiomatic Python patterns so you can write professional Python programs in no time.

**Quantified Tasks:** <https://quantifiedtasks.org>

A groundbreaking software estimation and planning methodology that objectively and repeatably tracks and communicates the effort involved in tasks.

**The Bug Hunters Café:** <https://bughunters.cafe>

A podcast that explores how our best planned software winds up with bugs. Features interviews with notable industry guests including Naomi Ceder, Sedat Kapanoğlu, and Jean-Heyd Meneide.

## Selected Skills

**Agile Project Management:** Owned and maintained backlog. Managing projects with changing requirements, high risk, and high churn. Implemented Scrum in existing team. Served as Scrum Master and Product Owner.

**Business Analysis:** Eliciting and maintaining requirements, managing stakeholder engagement, maintaining extensive documentation, developing policies and workflows. Collaborating with designers, developers, and stakeholders to develop solutions to business problems.

**Management:** Managed teams of developers ranging from interns to seniors. Mentored and trained developers, especially interns. Authored and implemented policies to address organizational challenges. Designed and managed administrative processes.

**Python:** Author of "Dead Simple Python" (No Starch Press). Designed and implemented native desktop applications, command line applications, APIs, ML/data pipelines, testing frameworks. Architecture, modernization, testing, and best practices.

**C and C++:** Designed and implement libraries and native desktop applications, particularly with efficient, memory-safe code. Diagnosing and debugging difficult errors, especially undefined behavior. Code modernization, memory management, algorithmic efficiency, and advanced debugging techniques.

**DevOps:** Maintained mission-critical image publication pipelines. Deep familiarity with Git. Implemented comprehensive CI/CD workflows with Docker, GitHub, GitLab, Phabricator, Jenkins, etc.

**Additional Technical:** Strong technical aptitude, enabling rapid onboarding to any language, framework or domain. Experience includes Bash, C#, JavaScript, TypeScript, Ruby, SQL. Configured and maintained public-facing, access-controlled Ubuntu servers on both bare metal and cloud.

**Hiring:** Conducted remote and in-person interviews of local and international candidates for various development and non-development positions at three organizations. 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.

**Speaking and Teaching:** Presented at technical conferences, colleges, workforce training, and universities on software development, management, career advancement. Developed courses and training materials.

## 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.