

Alyssa Riceman

alyssa@alyssariceman.com, +1 (732) 763-6275, twilight-flower on GitHub

Developer experienced particularly in the development of back-end analytics tools for large distributed cloud systems, as well as more generally in a variety of tasks involving pulling data from one place and reformatting and/or summarizing it for consumption elsewhere. Worked regularly in Python since 2017, and Rust since 2020; dabbled more intermittently in a variety of other languages over the years, and always happy to learn more. Tends to approach projects with a high focus on rigor and correctness, avoiding brittle hacks and instead aiming to understand problems deeply and solve them as comprehensively as is practical within the limits of available time.

Experience

- **Analytics Developer, Observability, IBM Public Cloud VPC** | 2022-01-01 to 2025-04-17
 - Developed and maintained a tool for automatedly reading metrics in IBM Cloud datacenters and estimating how widely-used each metric is, by whom, and how much it costs us to track. The tool's data output was used to inform more than \$500,000/month savings in metrics costs with no loss of critical monitoring coverage.
 - Created, developed, and maintained a tool to summarize the contents of large IBM Cloud Object Storage buckets quickly and efficiently, with near-constant memory usage over arbitrarily-many arbitrarily-large buckets. The tool's outputs were used to reduce particularly-costly usage of certain storage buckets—saving over \$10,000/month—as well as to help new users quickly understand how each bucket was being used and help experienced users confirm that data was being uploaded as expected.
 - Developed and maintained the second major version of a tool to poll and summarize the compute and storage capacity and utilization of IBM Cloud. The new tool-version's code was far clearer and more maintainable, as well as offering more detailed information output, and became a mainstay of Observability's capacity analytics.
 - Contributed to a major regularly-run tool for dumping summaries of the configuration of IBM Cloud's machines, increasing the thoroughness of its dumps, for purposes of enabling downstream use of the additional newly-dumped data by other tools (such as the above-mentioned capacity-summarizer).
- **Back-End Developer, Exapipe, IBM Public Cloud VPC** | 2021-04-19 to 2021-12-31
 - Developed tools to analyze log messages, breaking down log message volume by source in order to identify which tools, and which lines of code therein, were contributing the most to log maintenance expenses.
 - Developed an end-to-end test suite for an in-development observability data analytics system, ensuring correct writes and reads in the face of a variety of nonstandard edge-case inputs. Also developed a unit test suite for one of the major tools intended to publish data to that system, to similar effect for that tool.

Projects

- **Basalt:** EPUB reader extension for Firefox. Built partly to teach myself JavaScript and partly out of desire for a better browser-based EPUB reader than any preexisting ones.
 - **rib:** command-line tool built in Rust, reusing much of the logic from Basalt, to dump EPUB books to HTML and then display them in browser. More powerful and lower in memory overhead than Basalt, thanks to native filesystem access.

- **glowfic-dl**: open-source Python tool for download of content from an online fiction-hosting site in EPUB format. I wasn't the tool's creator, but I'm among its most active contributors, having made a variety of improvements to increase both the formal EPUB-format-compliance and the practical human-readability of the output EPUBs.
- **Fluorite**: dice roller, featuring both CLI and GUI functionality, built partly to teach myself various aspects of Rust development and partly due to a lack of other good dice rollers I could find. Is my current go-to dice roller for casual use on desktop.
- **Alyssa's Coding Journal**: blog about things I've learned in my time as a software developer. Highlights include extensive summaries of the internal structures of the EPUB 2.0.1 and EPUB 3.2 file formats, a summary of how to create a website for oneself, and a summary of basic considerations to keep in mind when building a plugin system for one's software.

Skills

- Clear and responsive communication, including in both synchronous and asynchronous remote contexts
- Collaboration with teams of varied sizes and varied levels of expected independence for team-members
- Programming languages: Python and Rust (experienced), Bash and JavaScript and Nushell and C/C++ and HTML and CSS (dabbled)
- Use of Linux systems—both virtualized and bare-metal—and common tools thereupon, including but not limited to git, ssh, and systemd.
- Research, including effective web-searching and reading technical documentation
- Love of learning; autodidactic acquisition of knowledge for its own sake
- Expository writing, including technical documentation, tutorials, et cetera

Education

- **Reed College** | Portland, OR | BA, Philosophy | Phi Beta Kappa | Fall 2015 to Spring 2019
 - The school didn't formally offer minors; but I took four computer science classes in a fashion that might have been counted elsewhere as a minor. Two intro classes, one class on operating systems (with a particular sub-focus on file systems), and one class on systems development more generally (with a particular focus on the cache hierarchy, testing, and performance-optimization).
- **Middlesex County College** | Edison, NJ | Fall 2019
 - Took a class on information security, covering basics of security both as a technical problem and as a policy problem.