

# Emma Claire Humphries

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Oakland, CA 94607 · 1 408 314 6143 · [me@emmah.net](mailto:me@emmah.net) · US Citizen

Experienced engineering operations leader, developer, and program manager. Over a decade's experience writing, running, and maintaining software at scale, building runtime monitoring tools, and supporting software engineering operations. My skills and experiences include:

- Program Management, Release Management, Communications and Technical Writing
- Systems Design, Defect Analysis and Debugging, Systems Monitoring, Reporting with Grafana
- Test-Driven Development, Programming in Ruby, JavaScript, Node, Perl, Java, Rust, and Python
- HTML and CSS, Static Site Generators
- Defect tracking and management with GitHub, Bugzilla, Phabricator, and Jira
- CAD using Solidworks, OnShape, Fusion 360, and FreeCAD
- Manual Machining (Lathe and Mill,) 3D Printing, Gcode, 3-Axis CNC Mills, CNC Lathes

## Recent Major Projects

### Updates to Live Streaming Reporting System

bandcamp.com

Retired technical debt which would have shut down our system that tracks plays of artists' tracks, potentially costing them royalty payments from PROs (Performing Rights Organizations.)

- Redesigned and migrated critical MySQL database tables and the code dependent on them to avoid limits imposed by technical debt
- Added unit tests to all our legacy code responsible for tracking plays of artist tracks

### (Near) Real Time Error Reporting System

bandcamp.com

Improved existing runtime error reporting tools in Ruby to filter stack traces, resulting in rapid response to production issues

- Rebuilt the error reporting service so that it collected more actionable error information.
- Wrote a stack trace parser which identifies the team responsible for the error
- Integrated with Slack, Google Cloud developer tools, and Grafana dashboards
- Built UI for product teams to manage the messages and errors they received

## Bug Triage Process

Mozilla.org

I reduced the time it took for a Firefox bug to get in front of the right engineering team and a decision made on it reported in Firefox from over a week to a day or two, providing engineers and engineering leadership with a unified view into the state of a codebase encompassing millions of lines and hundreds of components, and enabling a move to a monthly release cycle.

- Working with, and incorporating the feedback of engineering team leads, I designed and implemented a consistent scheme for the bugs affecting Firefox and reported in Bugzilla
- Using an AI/ML classifier developed by engineering operations, I was able to assign a significant number of new bugs to the appropriate product and category as they were reported
- Built and maintained dashboards reporting on the status and volume of untriaged Firefox bugs
- Wrote and managed documentation for bug handling

## Comment Moderation for Bugzilla

Mozilla.org

Developed and operated a process for handling reports of abusive behavior in our public bug reporting tools, which created a safer space for Mozilla's engineers and volunteers contributing code

- Led consensus building on process with engineering, QA, release, and leadership teams
- Wrote documentation on how to report and moderate comments in Bugzilla
- Worked with Mozilla Foundation community team to hold abusive contributors accountable

## Continuous Release Process

Peel Technologies

As the sole web engineer at a startup, I needed automation for unit and functional tests, as well as deployment of our web platform.

- Wrote unit and functional tests for Tune-In platform using Selenium, JUnit, and Mocha/Chai/Sinon
- Established processes for continuous release of our web applications in conjunction with DevOps

## Work History

**Technical Writer**, Contractor, Bugzilla.org, Winter 2023-4

**Senior Engineer**, Bandcamp, Fall 2020 - Fall 2023

**Staff Engineering Program Manager**, Mozilla, Fall 2015 to Fall 2020

**Web Engineer**, Peel Technologies, Summer 2014 – Summer 2015

**Senior Engineer**, White Hat, Spring 2011 – Summer 2014

**Web Engineer**, Contract, Fall 2010 – Spring 2011

**Project Manager**, Linden Lab, Fall 2007 – Summer 2010

**Web Engineer**, Apple, Fall 2001 – Summer 2007  
**Software Engineer**, 2Roam, Winter 2000 – Summer 2001  
**Software Engineer**, OnRadio, Spring 1999 – Winter 1999  
**Web Producer**, EPRI, Spring 1996 – Spring 1999

## **Volunteer Work**

### **LUNAR Board of Directors**

2024 - Present

Elected to LUNAR's (Livermore Unit, National Association of Rocketry) board as one of two members at large. LUNAR's mission is the promotion and safe development of the hobby of sport and high power rocketry in the region. Designed, fabricated, and wrote build instructions for a new club easy-to-build kit which we bring to events we table at such as at the Chabot Space Science Center and NASA Ames. The new kit can be assembled by children, with adult supervision, in 10 minutes or less. Assist with range operations (Launch Control, Range Safety, Rocketeer Check-in) at club launches.

### **Laney College Fab Lab**

2024 – Present

Assist Laney students preparing and running jobs on Epilog laser engraver/cutter. Wrote documentation for Epilog laser for new users. Commissioning Formlabs SLS nylon powder printer and developing processes for lab users. Introduce new users to the space and safety procedures.

### **WisCon/SF3**

Spring 2020

When it was clear that the COVID-19 pandemic would make an in-person convention impossible, I helped pivot a 1,000-person conference to online. I wrote our run books for live panels using Zoom, Jitsi, and YouTube, worked with professional transcribers to provide real-time captions, helped set up an online space for the conference using Discord, and wrote chatbots for the conference's Discord. We ran an event which had greater participation than in person (more people, from more places, and more diverse audience.)

## **Education**

Certificate in Machine Technology, Laney College, Oakland

MS (Economics,) University of Wisconsin-Madison

BA (Economics,) University of Texas at Austin

## **Certifications**

Level 2 High Power Rocketry, National Association of Rocketry