Emma Claire Humphries

Oakland, CA 94607 · 1 408 314 6143 · me@emmah.net · US Citizen

Summary

Experienced software developer and maker seeking opportunities in manufacturing and fabrication. I have over a decade's experience making, running, and maintaining software at scale, building runtime monitoring tools, and supporting engineering operations. In addition, I have been designing and fabricating flight-proven components for high-, mid-, and low-power rockets.

Skills

CAD using Solidworks, OnShape, and FreeCAD · Manual Machining (Lathe and Mill) · 3D Printing · Working with Composite Materials · Programming in Ruby, JavaScript, Perl, Java, Rust, and Python · HTML and CSS · Static Site Generators · Test-Driven Development · Program Management · Release Management · Defect Analysis and Debugging · Systems Design · High Power Rocketry · Model and High Power Rocketry Range Operations · Conference Planning · Organizing and Managing Volunteers · Communications and Technical Writing · GitHub · Bugzilla · Phabricator · Jira

Experience

LUNAR   SF Bay Area
Board of Directors   January 2024 – Onwards

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.

Assists with range operations (Launch Control, Range Safety, Rocketeer Check-in) at club launches.

Bandcamp   Oakland
Senior Software Engineer, Developer Tech   October 2020 - October 2023

As an engineer in the Developer Tech team, I built and maintained tools used by Bandcamp engineers working on our web app used by thousands of artists and millions of fans worldwide.

Redesigned and migrated critical MySQL database tables and the code dependent on them to avoid limits imposed by technical debt, preventing a situation where we would have had been unable to accurately track plays of artists' tracks, potentially costing them royalty payments from PROs.

Improved runtime error reporting tools in Ruby to filter stack traces: identified affected code, provided context, and notified teams responsible via Slack, resulting in rapid response to production issues

Updated Gems and other code to support modern (3.x) Ruby across development, staging, and production environments. These changes increased our throughput per app instance, reducing the size and cost of our production fleet.

Developed, coached, and trained engineering teams on best practices for managing their bugs and backlog of work in Phabricator, and trained them on and provided support for our developer tools

Built a webhook endpoint to collect delivery, bounce, and spam reports from SendGrid, which enabled the support team to research and close customer cases faster through locating missing emails.

WisCon/SF3   Online/Madison, WI
Online Team Co-lead   Spring 2020

In April of 2020, when it was clear that an in-person event was not possible, I took the tech lead role on an effort to pivot a 1,000 person conference to online; We were able to pivot to online, and run an event which had greater participation than in person (more people, from more places, and more diverse audience.)

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 Discord.

Prior to our pivot to online, I was the co-lead for one of the safer spaces at the in-person event, managing the volunteer schedule and logistics.

Mozilla   Mountain View
Staff Engineering Program Manager   November 2015 - August 2020

As Staff Engineering Program Manager (a.k.a. Bugmaster) for the Firefox Developer Workflow team, I developed and implemented bug handling policies and processes for Mozillans-both staff and community members-and educated them on best practices.

Working with, and incorporating the feedback of engineering team leads, I designed and implemented a consistent scheme for triaging bugs affecting Firefox and reported in Bugzilla, 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.

Using a 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; reducing staff and contractor workload, and the time it took to get a bug in front of an developer to hours instead of 7 to 14 days.

Developed rules and policies for using feature flags to deploy new Firefox features off-release cycle, preventing and reducing release-related bugs.

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 by drafting and shepherding proposal documents through engineering, QA, release, and leadership.

Contributed to a major revision of the Code of Conduct for Mozillans, and tested a pilot professional development course for Mozilla staff from underrepresented groups.

Gave multiple presentations on engineering workflow and feature release processes at conferences such as Open Source Bridge, FOSDEM, Node.js ConfEU, and Trajectory.

Wrote and managed documentation for bug handling.

Wrote sample code to guide teams building tooling on top of Bugzilla's APIs.

Peel Technologies   Mountain View
Software Engineer   June 2014 - July 2015

Integrated a third party service for managing TV viewer's DVRs, maintaining the interfaces to existing Peel DVR APIs as a drop in replacement.

Improved user conversions to our mobile apps through integrations with Twitter, Facebook, Google App Store, and iTunes Store.

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.

Built proof of concept for a phone-based television remote for FirefoxOS.

Education

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