Calliope Youngblood

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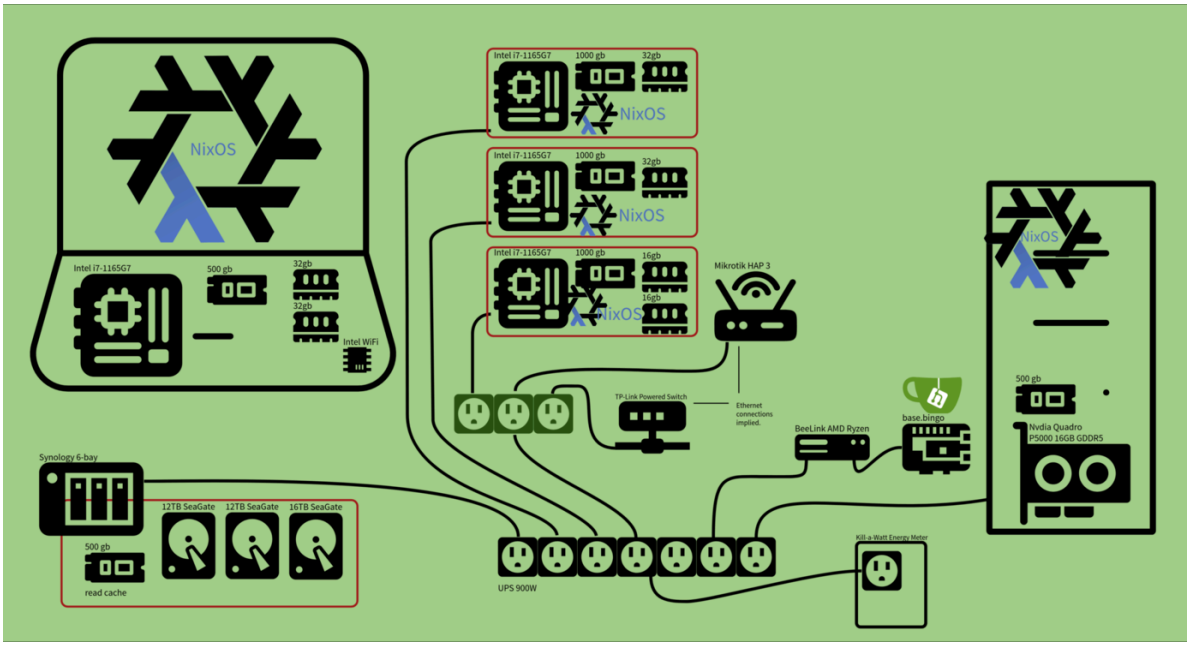
resume on calliope.operand.online
essays and code on operand.online

[lead] Operand Company

2023-01 > ongoing

[research] resilience engineering

- produce a modern program-and-deploy experience using secure and reproducible modules.
- encode and deploy a company domain page as an experiment in replacing WordPress.
- replace early-career approaches and codebases, using a much more capable selection of languages and base dependencies.
- deploy and manage numerous online program labs, running dozens of application subdomains.
- deploy on-premise email, passcode management, wiki-based guides, graphic co-design spaces, source-code relays, public discussion boards, audience metrics, and program logging apps.
- rebuild core dependencies using Nix, Nushell, Elixir, and Hyprland.



a diagram displaying Operand Co's original lab, running email and many open-source programs.

[commission] Pain Away of Philadelphia

2023-09 > 2023-12

- redesigned a scheduling procedure able to supersede SquareSpace's experience.
- enabled group bookings, and doubled the annual business income as recorded in SquareSpace.
- designed graphics displaying revenue per day, and comparable on an annual basis.

[board] HacDC

2022-10 > 2024-02

Hyperdemocracy

- co-designed the curriculum, to share modern machine learning approaches.
- prepared a language model capable of examining US Congressional legislation.
- ran an online API-scraping program to source legislation in bulk from api.congress.gov.

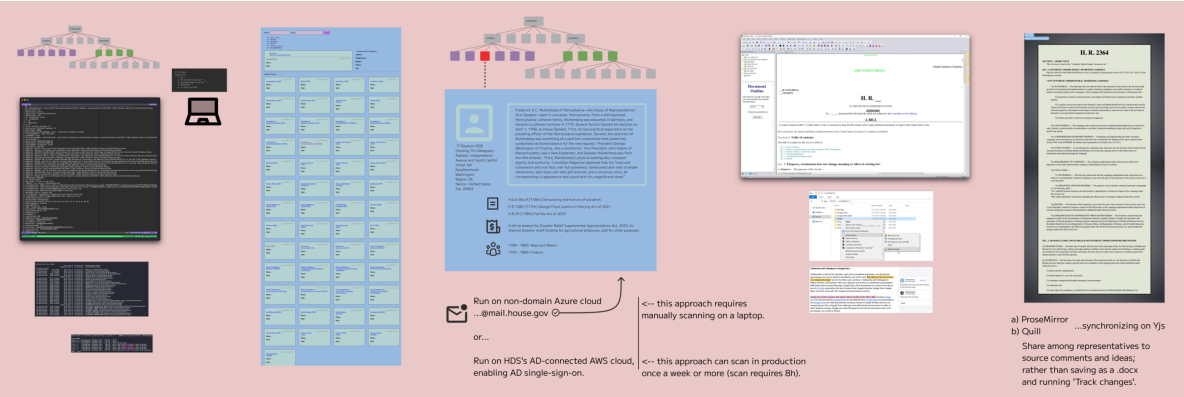
Secretary, 2023

- Radically reshaped our shared space, to demolish an unusable bathroom, arrange a server-rack room, and add an overhead cable bridge.
- Pioneered group's social media presence on LinkedIn and YouTube.
- Co-managed a speaker series, including camera live-streaming using a DSLR-to-USB recording procedure.
- Led migration of group wiki from legacy WikiMedia instance to modern Wiki.JS.
- Led collaboration with nonprofit neighbors in our building, to learn screen-printing skills in exchange for mechanical help.

US House of Representatives, Clerk's Office

2021-10 > 2023-02

- Collaborated with the House Digital Service to plan Legidex, an official employee index.
- Prototyped an organization address book, based on scans of ActiveDirectory records.
- Prototyped a replacement legislation composition engine, to enable peer collaboration while honoring legacy and future legislative schemas.
- Co-produced, and coded, modules in LIMS - the legislative information management system.
- Co-produced, and coded, eHopper - the legislation submission engine.
- Deployed many on-premise applications, to examine the reception of open-source code in the clerk's office.
- Managed Red Hat Enterprise Linux machines, and learned the pains of misaligned libc versions, in dynamically-linked libraries.
- Managed upgrades and common issues across XMetaL, the legislation composition engine.
- Managed many thousands of keyboard-bound macros in XMetaL, made in JavaScript, Perl, and VBScript.



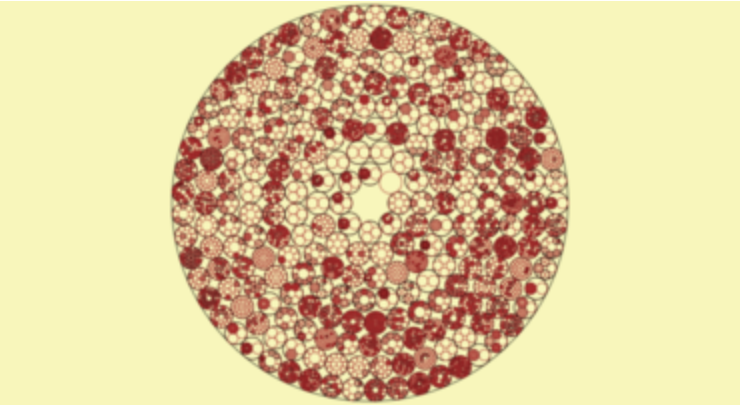
a diagram made during proposal of a house address book program to HDS

[lead] Assemble Company

2017-01 > 2023-12

[research] state legislation comparative analysis

- prepared an online copy procedure (scraper) for legal codes on justia.com.
- Reproduced the RINGS visualization to quickly compare structures of state legal codes.



A rendered graphic analogy of how Michigan's legal code is organized, as one among a broad inter-state comparison.

[commission] U of Washington, Clinical Informatics Research Group

- Produced a mobile web application designed to measure and ensure medication adherence, in a Tuberculosis research group.
- Bilingual applicación included a calendar displaying adherence, camera upload, disease FAQ, and care coordinator communicación.
- A companion coordinator application helped research clinicians engage their patient groups.

[commission] Nimbus Lounge, Resource & Room Sales Panel

- Composed a resource-tracking application to enable customers to book rooms and tables.
- Management panel displayed business metrics and applied discounts across menu.
- Ran as a production point-of-sale for many years, and had been included in the sale of the business.

[commission] Accupac, Industrial Manufacturing

- Led the procurement of a business intelligence platform, Sisense, after appraising six options.
- Prototyped applications and command-line programs based around core business reporting.
- Prototyped laboratory experiment management applications, including barcode references.

[research] pipeline-based programming using docker images and serialized message-passing.

- Prototyped a cloud container pipeline-programming platform, in Docker's early years.
- Deployed a browser extension to enable per-page scraping of resources, as an ingress process.

Code for America

2016-01 > 2016-12

[commission] Prison Occupancy Dashboard

- combined municipal prison records to design a compelling dashboard of cell-and-bed occupancy across buildings.
- in response to density, examined occupants with minor offenses, who may be recommended for early release.
- plainly displayed some challenges of overpopulation based on the pace of ingress & egress.

[commission] Seattle Police Department; RideAlong Labs

- led adoption of Docker as a moldable deployment option, on a department-managed offline, isolated network.
- [education] led a skills-building curriculum, based on Ruby on Rails and modern command-line programs.
- complied to FBI CJIS guidance necessary to run an application in a criminal justice -focused secure deployment space.
- Produced information architecture diagrams, port security appraisals, and application-specific page-access and page-edit auditing procedures.
- complied to HIPAA requirements regarding the healthcare concerns and residency scenarios of specific Seattleites who commonly rely upon police.
- Collaborated in the 2016 Data-Driven Justice Symposium, in the presidential compound's Eisenhower Executive Office Building.
- In emeritus, co-founded RideAlong Labs as a consequence of research and collaboration alongside police.

A Seattle Police challenge coin; Crisis Intervention Team

Thoughtbot; an app design & production agency

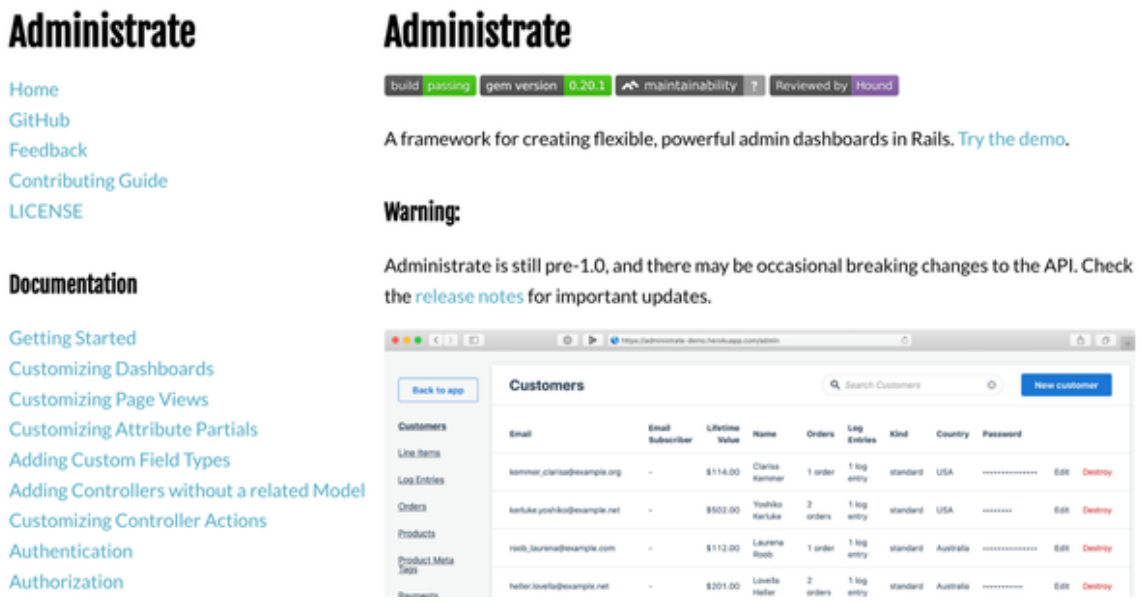
2014-11 > 2015-12

[education]

- led colleagues in the adoption of React, replacing many JS libraries in sporadic use.
- led discussions on VimScript, an editor configuration language in broad use across company.
- led colleagues in the adoption of python, through the Flask and Django web frameworks.

[open source] Administrate

- produced a dynamic, all-purpose admin dashboards in Ruby on Rails.
- dedicated each Friday ("investment day") to leading design and production.
- coordinated user interviews and focus groups to decide on scope and reach.
- managed a global release, including blog post, podcast appearance, hacker news announcement.
- channeled many eager responses through forum and issue management on GitHub.



A sample of the guidebook for the Administrate Dashboard package.

[product] Hound

- helped manage a program to nudge coding habits, based on automated comments on GitHub code changes.

[commission] Automattic

- prepared individualized displays of consumer's OBD car sensor readings.
- applied personas based on driving norms.

[commission] Lending Tree

- produced a simple onboarding experience helping consumers acquire home loans by describing their financial scenario.

[commission] Glassbreakers

- [education] led a skills-building curriculum, based on the nascent React web-app paradigm.

[commission] Autodesk scheduling & project management

- produced a Gantt chart to help Autodesk manage product scheduling across company.
- Based application on backbone.js, a minimal library, to ensure ease of upgrade in a chaotic pre-React landscape.

[commission] Donors Choose

- Designed changes to help crowd-funding teachers reach a broader audience through focused campaigns.

[education] EuRuCamp 2014, demo service-oriented architecture

2014-06

- an on-stage coding demo of a logging aggregation program based on RabbitMQ.

[internship] Microsoft

2012-05 > 2012-08

- managed legacy printer drivers, during a large-scale OS upgrade process to Windows 8, and launch of the Surface tablet.

[board] Association of Computing Machinery college chapter, VP.

2011-01 > 2014-05

- produced and led hackathons and coding challenges.
- organized a semimonthly schedule of speakers from local industry and academia.
- managed a student mailing list on college machines, using the early linux postman programme.
- enrolled in hackathons and videogame jams led by similar student groups in nearby colleges, including Spartasoft and Mhacks.

[education] Michigan State University

2010-09 > 2014-05

- Computer Science bachelor's degree, including a partial graduate courseload in cybersecurity & algorithms.
- a rigorously-paced mathematics progression focusing in combined calculus and linear algebras.
- ancillary courses in electrical engineering, behavioral psychology, Chinese language.
- [research] genetic algorithms & digital evolution, in the multi-university BEACON program.
- [research] Expanded the AVIDA simulation program, wherein organisms' actions are led by genetic mutation & recombination, to enable predator-prey dynamics.
- [research] crowdfunding dynamics using a home-made app to fund student media productions.
- [research] agent-based modeling of macro-economic population dynamics.

[education] Zhejiang University

- One semester study abroad, focused on Mandarin Chinese.
- Conversational speaker in many scenarios.