

Profile: Passion and experience in scaling technology and tech team productivity, supporting equity and happiness at work with good process and human connections. Driven by the user experience.

Principal Software Engineer 2022-Present, [Pivot Bio](#)

Tech: Python/Django, SQL, Databricks/PySpark, Terraform, AWS Batch, RDS, Lambda (serverless), et al

Favorite Projects

Data warehouse build-out (Implemented w/ Databricks)

- Starting from a multi-siloed environment, led project from requirements gathering across the org, vendor assessment, and full technical implementation w/ training across the organization.
- Architected and managed robust ETL and security.

Field trial analysis pipeline (Architected and implemented)

- Built data engineering pipeline to structure it for data science analysis.
- Combined lab, greenhouse, and field trial data from many departments coming from multiple (vendor) databases, including IOT machine data.
- Reduced processing data for analysis from months to one day, enabling faster business-decisions.

Lead Developer 2015-2021, [MoveOn](#)

Tech: Python/Django/Node, SQL, React, GraphQL, Redis, AWS Lambda (serverless), RDS/Postgres, Redshift, et al, VPN/VPC

Favorite Projects

Spoke (Built and fostered a now-thriving open source project and community)

- Manages campaigns and volunteers for "textbanking" (advocacy through SMS like phonebanking)
- Focused on an easy startup experience to bring in participation. Maintained backwards compatibility/easy upgrade paths and developed layered community with contributing organizations. It became one of the most active progressive open-source projects.
- Over 500 separate organizations used it during the 2020 election cycle. Contributors and users including the Bernie Sanders & Warren campaigns, the DNC, and dozens of candidates, including multiple primary presidential campaigns.

Sharebandit (Architected and implemented backend)

- Named after the [Bayesian bandit algorithm](#), it offered multiple permutations of title and image for when a page was shared on Facebook, eventually and automatically "choosing" a winner to be shared with future clicks to share the page.

Team Support and Development

- Formal and informal mentorship and training for the developer team and organization.
- Organized and wrote hiring processes and test plans (w/ [testdome](#)) that scaled for a small tech team and respected the dignity of candidates.
- Lead team in a reorganization of work/delegation we called "Realms" to balance focus and siloization.

Director of Digital Technology 2011-2015, [New York Public Radio](#)

Tech: Python/Django, Varnish, Memcache, Puppet, Ubuntu:AWS/Rackspace, Postgres, Git, Backbone.js, PhoneGap

Favorite Projects

Managed developer team

- Built team from two developers to eight, introducing Git and practices like Agile and 20% time
- Oversaw the scaling of [WNYC](#), [WQXR](#), and national show sites like [Radiolab](#) and [On the Media](#)
- Performed system administration duties throughout, along with establishing a DevOps team
- Brought vendor-based mobile apps in-house with a small internal mobile team
- Managed tech hiring and support infrastructure for [WNYC's DataNews group](#)

Cross-Domain AJAX Login and Tracking (Architected and helped implement)

- Consolidated login across several websites and substantially increased performance by removing sessions from main website requests

Discover in WNYC Mobile App (Architected and implemented backend)

- "Choose some topics and we'll build a playlist for your offline subway commute."

Hurricane Sandy coverage (Implemented Scaling and managed response)

- NYC hurricane map linked from Google and Yahoo home pages during the hurricane held up to massive traffic. Managed tech team emergency coordination during power outage

Senior Programmer 2005-2011, [Columbia University Center for New Media Teaching and Learning](#)

Tech: Open Source, Python/Django, OpenLayers.JS+GeoDjango, PHP+Drupal, Apache, Linux+Ubuntu+Xen, MySQL/Postgres

Favorite Projects

MediaThread [code](#) (Tech Lead)

- Annotation and analysis platform for video and images within websites for educational and scholarly purposes
- Conceived, architected, programmed, and supervised other programmer contributions.

- Presented at Open Video Conference 2010. In 2011, used in 20 courses and growing, with MIT, ArtStor running separate instances. Worked with outside media archives' technical groups to support their sites

Masivukeni, South Africa [code](#) (Tech Lead)

- HIV-treatment adherence intervention for offline clinics in South Africa
- Used HTML5 localStorage (and earlier Firefox implementation) to store patient data for later transfer
- Comprehensive Selenium functional tests. Clients reported: "not a single issue"

Mapping the African-American Past (Front-end Dev)

- [Immersive historic maps of New York City](#) for contextualizing African-American historical locations
- Archivist Round Table Award 2009

Drupal CMS farm [multisite_manager code](#) (Initiated on seeing a need)

- Secure way for project managers to create new sites easily without a programmer
- Maintenance of a public Drupal module (actively used on 200+ sites). Patches submitted and accepted for Drupal-core

User Services Consultant 2000-2005, Columbia University: Academic Information Systems

Tech: Perl, Remedy+Oracle, Solaris, Apache

Favorite Projects

User Knowledge Base and Request Tracking System for Technical Support

- Architected and implemented for three IT organizations and multiple IT Departments
- Planned and designed website; Developed initial knowledge base, including FAQs and standard requests
- Designed and Implemented reports to improve the site and monitor usage by all users

Other Responsibilities and Projects:

- Backup Computer Security Responder: compromised on-campus computers, viruses, and copyright violation complaints
- Internal support tools - UNIX and Web scripts to assist front-line Help Desk consultants

Some Side/Short-term Projects

2023-2024 Laser cutting teacher at [a local maker space](#)

2018-2021 [Encrypted enrollment form](#) for Harm Reduction access/supplies ([NEXT](#))

2004 [Ouwi Art Project](#) - Created a non-linear writing system and constructed language

1993-1995 Educational Computer Camp for Communications Exceptionalities (ECCCE), London, Canada: Camp Counselor CAD instructor to deaf and learning-disabled campers, aged 12-17

Education

2001-05 Columbia University School of General Studies: B.A., Mathematics

1996-99 Columbia School of Engineering and Applied Science (Electrical Engineering)

Back in the day Commodore128 BASIC, 80386 asm, C, Pascal, Java 1.0