

EXPERIENCE

- **SOOT (Seed Startup, AI copilot for visual media)** New York, NY
Senior Software Engineer *Feb. 2021 - Oct. 2024*
 - *Developed critical security and privacy infrastructure*
 - Architected a highly scalable static file serving pipeline to restrict data access to authorized users only. Integrated CloudFront, Lambda@Edge, S3, and custom RBAC logic to **promote confidentiality by enforcing least privilege access** to sensitive user data.
 - Designed a local filesystem sync engine and integrated it with a custom Electron desktop client. Securely configured an app update server and CI/CD pipeline with automated code signing to continuously deliver new features to users, **ensuring integrity and mitigating MITM threats** across the software supply chain.
 - Built an AI-powered file ingestion pipeline leveraging CLIP, UMAP, FAISS, and Stable Diffusion. **Proactively blocked malicious file uploads** through a **deny-by-default strategy** for validating files. Leveraged presigned URLs to securely manage uploads to S3, **reducing unauthorized access opportunities**.
 - Extended GraphQL API functionality to support comprehensive, scalable queries, including a mechanism to **fulfill the GDPR right to data portability** by enabling users to bulk download their account data.
 - Championed and orchestrated the rollout of OpenTelemetry coverage across all backend services and enabled distributed tracing with Zipkin. The logging and tracing records **improved overall system observability, increased product availability, and facilitated incident detection and response**.
 - *Provided security support to frontend and design teams*
 - Developed and maintained end-to-end authentication infrastructure, integrating Firebase, Google SSO, and associated tooling. Authored an internal Vue/vanilla JS library **providing secure-by-default identity and session management utilities** for frontend developers.
 - Worked closely with the design team to deliver numerous Vue components that **improved user communication and visibility during failures**.
 - *Identified and optimized cloud infrastructure bottlenecks*
 - Configured a horizontal autoscaler that adjusted Kubernetes worker pods based on SQS message queue size, enabling a **2x increase in user upload capacity**.
 - Managed compute resources using Terraform to support product deployments and rollbacks. Automated the deployment process across the stack, **decreasing deployment time by ~20%**.
- **LiveStories (Series A Startup, focused on civic data storytelling)** Seattle, WA
Software Engineer (Technical Lead on LiveData) *Sep. 2019 - Feb. 2021*
 - *LiveData* (Latest version of flagship product, an online data explorer and chart builder for proprietary civic data)
 - **Managed three engineers** across three continents to develop and launch an MVP to replace existing app.
 - **Advised CEO** on design/development strategy and **cut sprint planning meeting lengths in half**.
 - Developed **4/7 of the MVP's critical features**, including authentication, location-based search, and chart editing
 - Re-architected the search function for the data library and **reduced load time by 40%**.
 - Facilitated transition for existing users by integrating LiveData into the current product UX.
 - *Forward* (Platform for local governments to provide COVID-19 economic relief to small businesses)
 - Shipped an email campaign launch platform for government clients to reach businesses based on their eligibility for a given aid program, **used by more than half of our clients**.
 - Built tabular React UIs for government clients to analyze aid eligibility for **over 10,000 businesses**.
 - Developed and maintained UIs to empower struggling businesses to apply to **more than 130 municipal and federal aid programs** and gain access to **over \$600,000 in available pandemic relief**.

EDUCATION

- **Columbia University** New York, NY
Bachelor of Arts in Computer Science *Sept. 2014 - Feb. 2018*

TECHNICAL SKILLS

- **Proficient:** Linux, TypeScript/JavaScript (Node, React, Vue), Python (Flask, NumPy), Terraform, MongoDB, AWS (CloudFront, CloudWatch, DynamoDB, EC2, ECR, EKS, Lambda, S3, SQS), GraphQL
- **Familiar:** C, C++, Go, Kubernetes, Docker, Burp Suite