

Zack Adams

Full-Stack Engineer (Frontend-Focused) for Social Impact

adams.z.d@gmail.com [linkedin.com/in/zacharydadams](#) [github.com/drzackyll](#)

PROFESSIONAL SUMMARY

Frontend-focused full-stack engineer with 9+ years building data-dense, mission-critical web applications in React and TypeScript, most of them for humanitarian and social-impact organizations. I have built component libraries and design systems from scratch, led frontend architecture for an AI/ML logistics product, and built real-time geospatial dashboards for emergency response.

Four years at UNICEF HQ, including as a founding member of Magasin, a UNICEF-designated Digital Public Good. Independent consultant since 2024, currently building Rescue.co’s emergency dispatch analytics platform end to end. I work across TypeScript and Python, care as much about getting tools adopted as about building them, and use AI-assisted development (Claude Code) daily.

CORE SKILLS

Frontend	React (incl. React 18), TypeScript, JavaScript, Next.js, Redux, Context API, React Router, Styled Components, MUI, TailwindCSS
Design systems	Component library architecture, Storybook, design tokens, Figma-to-code, npm package publishing, cross-team adoption and stewardship
Backend & data	Python (FastAPI/Flask), REST and GraphQL APIs, SQL, PostgreSQL, database design, Auth0
Data visualization	Apache Superset, Mapbox GL, Power BI, RapidPro, Matomo, real-time and geospatial dashboards
Tooling & delivery	Jest, React Testing Library, Webpack, Rollup, Bazel monorepo, Git/GitHub, AWS, CI/CD, feature flags (LaunchDarkly), canary deployments
Leadership & practice	Technical leadership, mentoring, code review, roadmap ownership, Agile/Scrum, stakeholder liaison, change management, AI-assisted development (Claude Code)
Languages	English (native); Spanish (conversational/intermediate)

PROFESSIONAL EXPERIENCE

Lead Analytics Consultant — Rescue.co

Jul 2025 – Present

Independent consultant

- Architected the complete frontend for a real-time emergency dispatch analytics platform (Next.js/React, Apache Superset, PostgreSQL, GraphQL) serving ambulance, air rescue and roadside response operations
- Designed and deployed Apache Superset as the central BI hub, with row-level security so ambulance companies, funders and leadership each see only the data relevant to them
- Built geospatial dashboards and Mapbox GL map layers for real-time incident tracking, plus a live asset-tracking map giving the dispatch center visibility of response units
- Optimized GraphQL/SQL data flow to minimize latency for mission-critical dispatch decisions
- Implemented Auth0 authentication and role-based access control across internal teams, partners and funders, including partner-facing API and data-exchange integration

- Built reporting suites for leadership, investors and grant-making/donor organizations
- Owned the product lifecycle from requirements and database schema through roadmap, delivery and handoff to the internal team

Senior Engineering Consultant — Optimal Dynamics

Jul 2024 – Mar 2025

Independent consultant

- Continued frontend engineering and technical leadership for React/TypeScript applications as an independent contractor: feature development, code review and architecture guidance

Technical Lead — Optimal Dynamics

Jun 2022 – Jun 2024

New York, NY (Remote)

- Led frontend development of the flagship AI/ML-powered Dispatching product from concept to v1 launch in 4 months, including real-time state management for ML recommendation updates on 1-5 minute cycles and external load-board search integration
- Built interfaces that explained AI recommendations and simulation results (including LLM-powered explanations) and let operators override recommendations with recorded reasons, capturing structured feedback from users
- Led the migration of two legacy frontend applications into a Bazel monorepo, upgrading all frontends to React 18 and consolidating build and distribution for an engineering organization of 25-30
- Stewarded the component library as adoption grew: reviewed and merged other engineers' pull requests, evolved its API, defined and enforced frontend architectural standards, and mentored senior engineers
- Drove TypeScript adoption from 0% to 100% across ~15,000 lines of code, eliminating a recurring class of runtime type errors
- Implemented feature flagging (LaunchDarkly) from zero to one, plus canary deployments and automated monitoring, enabling trunk-based development while maintaining 99.99%+ uptime
- Developed Python backend logic (FastAPI/Flask), including data transformations, API endpoints and integration with the ML recommendation engine
- Served as the team's second-in-command, writing user stories and running sprint planning and retrospectives in the engineering manager's absence, and as technical liaison to executive leadership for board meetings and investor updates

Senior UI Engineer — Optimal Dynamics

Sep 2021 – Jun 2022

New York, NY

- First internal frontend hire; built the company's component library from scratch on MUI as sole primary developer (75%+ of component development), with Storybook documentation, published as a private npm package used across product frontends
- Partnered directly with the VP of Design to translate high-fidelity Figma specs into pixel-perfect, reusable React components that became the company-wide design system
- Refactored a legacy React codebase to modern patterns and TypeScript

T4D Software Engineer & Data Analyst — UNICEF

Jan 2020 – Sep 2021

New York, NY

- Founding member of the Realtime Data Driven Dashboards initiative, later recognized as the UNICEF Digital Public Good Magasin; led the presentation layer and all frontend development

- Built and deployed a dashboard platform (React, Apache Superset, SQL) serving UNICEF country offices and RapidPro (SMS/WhatsApp) workspaces, with row-level security for cross-office data isolation
- Drove adoption with dashboard templates, an in-product guided tour of Superset and training materials for non-technical users across dispersed field offices, refined with a test group of end users
- Served as product/technical liaison between country-office stakeholders and engineering, translating field requirements into technical specifications
- Led development of the Security Incident Reporting system for UNICEF EMOPS, with offline use, data sync and protection of sensitive personal data; ran client meetings and managed a small cross-functional team through API design, database schema and delivery

Software Engineer — UNICEF

Aug 2017 – Dec 2019

New York, NY

- Contributed to eTools, the program management platform UNICEF country offices use to manage partnerships, monitor implementation and track results; upgraded modules to Polymer 2/3 and rebuilt several primary dashboard pages
- Built Power BI dashboards for country, regional and headquarters stakeholders, and developed impact measurement frameworks, donor reporting and a reusable Matomo usage-tracking component
- Worked with designers and backend developers to establish consistent UI standards and reusable styling guidelines

EARLIER EXPERIENCE

Development Communications Manager — The Episcopal Church (DFMS), New York Nov 2012 – Jul 2016

Previously Haiti Database Coordinator. Coordinated between Haiti-based field operations, fundraising teams and executive leadership for relief and development programs; led creation of the Haiti Database mapping tool and fundraising websites to improve donor engagement and coordination between relief actors.

Africa Governance Analyst — Flattau Associates, Washington, DC

Nov 2011 – Oct 2012

Produced quarterly analytical reports on governance trends in Rwanda and Tanzania for client decision-making.

Research Assistant — US Institute of Peace, Washington, DC

Aug 2010 – Sep 2011

Wrote case studies, simulations and course materials on negotiation, governance and conflict prevention.

EDUCATION

M.A., International Peace and Conflict Resolution — American University, School of International Service, Washington, DC

2009 – 2011

Thesis on environmental conflict in the Central African Republic.

B.A., International Studies & Political Science — Macalester College, St. Paul, MN

2003 – 2007

Web Development Immersive (Full Stack Certificate) — Flatiron School, New York, NY

2016