Lloyd Richards

TypeScript engineer building developer tools, protocol adapters, and reusable application systems.

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Executive Summary

Developer tooling and platform engineer with 6+ years building TypeScript products. I rebuilt Effect's McpServer around versioned protocol adapters, including the stateless 2026-07-28 runtime. My open source work also includes Effect Boxes for terminal layouts and Stack Effect for application scaffolding.

- Rebuilt Effect's McpServer with versioned protocol adapters, including the stateless 2026-07-28 runtime
- Built Effect Boxes, a composable terminal layout library, and Stack Effect, an application scaffolding CLI
- Designed the IPEN WordPress content schema and a validated pipeline that reports actionable errors to editors

Technical Skills

TypeScript, React, Next.js, Node.js, Effect, Developer Tooling, Design Systems, PostgreSQL, CI/CD, Docker, Terraform, Kubernetes, Vercel

Experience

Interactive Things — Professional Interaction Engineer

Feb 2023 Present

Fullstack developer specializing in interactive, data-centric platforms for public sector and Fortune 500 clients. Responsible for technical architecture, data pipelines, and component libraries across 8 projects with 6 clients.

- Sole developer on the **OECD Competitiveness Outlook Data Hub** (1100+ pages), winning Silver at Swiss Viz Awards 2025 and German Design Award 2026
- Collaborated with a 3-person dev team on the **Cancer Monitoring Dashboard** (German Design Award 2026), mentoring an intern through pair programming and code reviews
- Refactored a legacy Fortune 500 analytics platform, redefining the domain model with data science teams and building complex Snowflake queries across a data lake serving 50-100 daily users
- Built a shared, themeable component library used across 3 OECD applications with Tailwind CSS
- Designed TypeScript data pipelines to transform unstructured client documents into structured datasets for D3 visualizations and CMS-driven sites

Vatorex AG. — Data Visualization Specialist

Apr 2021 Jan 2023

Owned design and development of digital products for an IoT beekeeping platform serving 500 users and 10,000 connected hives worldwide.

- Built a cross-platform mobile app from scratch in Flutter, replacing separate Swift and Kotlin codebases and reducing feature delivery time from months to weeks
- Migrated backend infrastructure from per-user AWS databases to a consolidated GCP architecture with Firebase/Firestore, improving monitoring and business intelligence
- Designed read-heavy data pipelines for daily sensor transmissions and built dashboards for both beekeepers and internal R&D teams
- Mentored a mobile developer on Flutter/Dart while iterating on UI and backend improvements
- Supported pivot from hobby to commercial beekeeping (20-50 clients, thousands of hives each), adapting the platform for trial cohort management

Vatorex AG. — Data Visualization Intern

Oct 2020 Mar 2021

First design-focused hire at the company. Consolidated inconsistent interfaces across web, Swift, and Kotlin apps into a unified design system and brand.

- Audited existing applications and created the company's first design system, unifying UI patterns across three platforms
- Coordinated with the development team to implement consistent components, replacing ad-hoc designs built by rotating interns

Interactive Things — Data Visualization Intern

Jan 2020 Jul 2020

Design and development internship focused on data visualization. Created static and interactive visualizations for both internal and client-facing projects.

- Prototyped data interactions and helped transform large datasets for client-facing dashboards
- Collaborated with both design and engineering teams for iterative releases

Lloyd Richards Design — Regenerative Garden Designer

Apr 2016 Oct 2018

Ran an independent design-build practice specializing in ecological and permaculture-based landscape design. Managed 26 projects end-to-end from client acquisition through to construction.

- Designed residential gardens, food forests, and community spaces using AutoCAD, producing multi-year phased plans with succession planting timelines
- Built and delivered projects personally, coordinating with carpenters and labourers for specialized work
- Created client-facing documentation in InDesign combining technical plans, hand-drawn renders, and data-driven timelines to communicate long-term ecological development
- Managed all business operations including sales, marketing, invoicing, and client relationships

Key Projects

Effect Boxes (2026)
Built an open source library for composable terminal layouts, used in the Stack Effect scaffolding CLI.

IPEN Plastic Map (2024)
Designed IPEN's WordPress content schema and built a validated pipeline for the frontend with actionable errors for editors.

Competitiveness Outlook Data Hub (2024)
Interactive data storytelling platform built using fullstack technologies. Created backend logic for scoring systems and visual data transitions.

SME Policy Index (2026)
Multi-platform data visualization system extending the Competitiveness Outlook design language. Built unified theming architecture using design tokens and monorepo structure for backwards compatibility.

Education

- **Master of Architecture, Environmental Design (1 year),** University of Calgary
  Sep 2012 Apr 2013
- **Bachelor of Arts (Multidisciplinary),** University of Calgary
  Sep 2006 Apr 2011

Community & Volunteering

- **Organizer,** Data Visualization Zurich MeetUp
  Oct 2023 Present
- **Events Committee Member (2024),** Outlier Conference
  Feb 2024 Aug 2024