

Senior Software Engineer, Full-Stack and Data Visualization

Award-winning engineer with 10+ years of experience

Full-Stack Engineering | Data Visualization | Data Journalism | Web Mapping | Custom Analytics

SKILLS

Core: JavaScript/TypeScript • HTML/CSS • SVG/Canvas/WebGL/GLSL • Git • SQL • Python

Front-End: React/Next.js • Svelte/SvelteKit • MUI • Mantine UI • Bootstrap • Angular

Data Visualization: D3.js • Observable Plot • Mapbox/Maplibre • Deck.gl • Regl • ArcGIS • QGIS

Back-End: Node.js • Express.js • tRPC • Drizzle ORM • PostgreSQL • Flask • REST APIs

Tools & Platforms: Github • Vercel • Docker • CircleCI • Sketch

Languages: English (native) • Spanish (fluent) • French (intermediate)

PROFESSIONAL EXPERIENCE

Senior Product Engineer, Front-End and Data Visualization | [C&EN](#)

Aug 2025 – Present

- Architect and develop custom Next.js content analytics platform to serve editors, writers, and analysts
- Produce interactive multimedia and data-driven science features for Chemical and Engineering News
- Collaborate with stakeholders, journalists, editors, analysts, and subject experts to ensure product quality
- Evangelize data visualization, custom analytics, and interactive journalism best practices
- Maintain SvelteKit starter project for quickly scaffolding interactive features and custom graphics

Senior Software Engineer, Data Visualization Engineer, Data Journalist | [Freelance](#)

Jul 2018 – Present

- Engineered 30+ emotionally resonant visualizations using D3, React, and more, driving 2M+ pageviews
- Developed custom data-driven applications for 10+ clients, reducing data analysis time by average of 60%
- Implemented responsive data storytelling frameworks that increased user engagement by 85%
- Worked with clients ranging from indie science publications like Undark to iconic brands such as People

Senior Software Engineer, Full-Stack and Data Visualization | [Dotdash Meredith](#)

Aug 2018 – Feb 2023

Front-End

- Spearheaded the front-end development of Trend Detector—a predictive analytics application—enabling advertisers and editors to accurately identify market trends 5x faster
- Established front-end code standards and review processes, reducing bug reports by 30%

Full-Stack

- Architected Data Labs—an analytics platform—using React, Flask, and CircleCI, enabling 100+ stakeholders to access tailored data insights
- Built a custom analytics platform using D3 and Flask to showcase 15+ Data Science R&D products
- Used Node.js and Express.js to build a data services layer and API, paving the way for real-time analytics

Data Visualization

- Owned end-to-end development of 50+ data visualization products using React, D3, Observable Plot, and more, collaborating closely with product managers, data scientists, and end users in an agile environment
- Developed Black Friday optimization tool that drove 45% increase in affiliate revenue through data-driven product recommendations
- Designed interactive ontology visualization using D3 and React, managing 100K+ taxonomy relationships
- Developed CES-featured visualization suite analyzing social media trends across 50M+ user interactions
- Built interactive network visualization of terms for advanced analysis of aggregated social media trends

Instructor, Data Visualization with D3 | [Impact Labs](#)

Dec 2019 – Jan 2020

- Taught D3.js fundamentals to Impact Labs 2020 fellows (a cohort of social change-oriented engineers)

PROFESSIONAL EXPERIENCE, Cont.

Co-Author | *The Global Positioning System and GIS, 4th ed. (CRC Press, 2025)*

Feb 2023 – Sept 2025

- Wrote detailed exercises to guide students through the nuances of capturing and editing geographic data
- Explained theoretical concepts necessary for understanding GPS/GNSS in an approachable way

Data Art Exhibition Organizer & Curator | *Data Through Design (DxD)*

Sept 2019 – Sept 2021

- Co-produced exhibition celebrating tangible, multimedia expressions of New York City's Open Data
- Collaborated on all aspects of exhibition production & curation; worked with artists (e.g. Mona Chalabi)
- Facilitated Data Dialogues, a collaborative discussion series exploring social issues through data art
- Collaborated with NYC Mayor's Office of Data Analytics, BetaNYC, Open Data Week, & the US Census

AWARDS AND HONORS

- Winner of the ASJA [Donald Robinson Memorial Award for Investigative Journalism](#), 2022
- Nominated for ASME's [National Magazine Award](#), 2022
- Nominated for NIHCM Foundation's [Digital Media Journalism Award](#), 2022
- Listed on the Global Investigative Journalism Network's [Data Journalism Top Ten](#) list, 2021

EDUCATION

Simon Fraser University | B.A. Communication, Art and Technology

2010

- Undergraduate Semester in Dialogue alumnus (F.T. collaborative learning program)

Metis Data Science Bootcamp | Data Visualization with D3 Certificate

2016

LINKS

- [Portfolio](#)
- [Investigative interactive exposing the issue of aging dams upstream from toxic waste sites](#)
- [Interactive exploration of what it takes to win the Nobel Prize in chemistry](#)
- [Data Through Design 2021: Ground Truth](#)
- [Data Sketches in Observable](#)

EARLY CAREER HIGHLIGHTS

Research Analyst | *McAllister Opinion Research*

2012 – 2016

- Produced and programmed IVR survey campaigns using XML and custom scripting languages
- Designed and optimized voice user interfaces for maximum response rates
- Built data collection and analysis pipelines for quantitative and qualitative research

Audio-Visual Technician | *Time Inc.*

2014 – 2018

- Managed mission-critical live systems for state-of-the-art auditorium
- Orchestrated technical operations for high-profile events requiring zero-downtime
- Programmed show control systems (QLab) for automated multi-system coordination