JEREMY KOULISH

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Senior Frontend & Product Engineer

TypeScript ♦ Vue/Nuxt ♦ React/Next.js ♦ Accessible, Data-Intensive Web Applications

Senior frontend and product engineer with 10+ years of experience building complex, user-facing web applications and data-intensive digital products. Deep expertise in TypeScript/JavaScript, Vue and modern frontend architecture, responsive design, accessibility, web performance, testing, and API integration. Substantial hands-on experience with React, Next.js, Nuxt, Node.js and server-side rendering. Product-minded and highly collaborative, with a track record of translating complex requirements and user needs into intuitive, maintainable software, leading major technical initiatives from architecture through implementation, and mentoring other engineers.

Selected Experience

Deputy Director & Senior Product Engineer, **Digital Democracy Project,** Remote, 7/2025 – present
https://digitaldemocracyproject.org/

- Created a custom DDP design system and React component library, distributed as a lightweight npm package for use across DDP's current and future user-facing products. Standardized styles and accessibility patterns using SCSS modules and WCAG Level AA guidelines.
- Spearhead a full-scale rebuild of DDP's public website as a Next.js application, combining reusable frontend architecture with server-side rendering; partner closely with organizational leadership to develop and maintain a product roadmap that aligns technical development with organizational goals and evolving user needs.
- Lead frontend engineer for interactive applications embedded throughout DDP's public website, transforming complex data into rich, intuitive user experiences through responsive maps, charts, tables, and other visualizations using Mapbox and D3.js.
- Helped migrate an enterprise application from PHP to Python/Django, modernizing its architecture to deliver content to the UI via content-tailored REST APIs.

Lead UI Developer, **Ignite IT Systems,** Remote, 12/2024 – 5/2025
Senior Software Developer, **MetroStar Systems**, Reston, VA, 8/2019 – 11/2024
U.S. Census Bureau – CEDSCI (contract) – https://data.census.gov

- Senior frontend engineer and data visualization specialist for data.census.gov, the Census Bureau's flagship open data platform; promoted to Lead UI Developer in December 2024.
- Led a full-scale rewrite of the frontend code base as a Nuxt application, leveraging server-side rendering, TypeScript, and Vue 3; configured Vite as a build tool, migrated the unit test suite from Jest to Vitest and increased measured code coverage by more than 20%, and established automated end-to-end and performance testing with Playwright.
- Functioned as a subject matter expert on frontend development and data integrity; mentored junior developers, maintained technical documentation, and enforced standards for code quality, web performance, accessibility, and SEO. Designed a coding challenge and led technical interviews for six UI developer positions.
- Envisioned and built a custom, reusable, and scalable chart library leveraging the capabilities of Vue and D3.js and aligning with Census Data Visualization Standards; led design and development of a new Chart page using the library that earned praise from senior Census officials.
- Contributed to the architecture, build configuration, and public release of Aqua, CEDSCI's Vue-based internal component library.
- Guided comprehensive overhauls of three data-intensive, heavily trafficked product views, including development of OpenAPI specifications for new REST API microservices. Built a Python-based proxy API to support testing of unreleased UI behavior.

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Web Developer, **Bixal Solutions**, Fairfax, VA, 10/2015 – 5/2019

- Led frontend development for select client projects, primarily using JavaScript/ React and Drupal. Served as tech lead for modernization of a DOJ Office of Justice Programs website, developing a React frontend and overseeing its integration with SharePoint CMS as a progressive web app.
- Built interactive user-facing digital products for federal clients, including custom Mapbox maps, a React-based data dashboard, and responsive, high-traffic Drupal websites for nearly a dozen federal government agencies.

Research Associate, Center on Nonprofits and Philanthropy, **Urban Institute**, DC, 11/2012 – 12/2014

- Analyzed nonprofit sector trends based on data from the National Center for Charitable Statistics. Specific tasks included SQL data queries, statistical analysis using Excel and Stata, producing detailed tables and graphs primarily using Tableau, literature reviews, and writing and editing briefs summarizing conclusions. Lead author of briefs on 501(c)(4) organizations, charter schools, and symphony orchestras.
- For a high-profile evaluation of the Head Start Designation Renewal System, helped develop a statistical model using principal components analysis that served as the backbone of the evaluation's empirical analysis; created an extensive primer on the relevant regulations for use by the project team; led development of the project's OMB package. Also engaged in budget management and other administrative tasks for the project.
- Served as CNP's point person for communications, coordinating e-newsletter production, social media and blogging activities, and responses to periodic press inquiries. Commentary on 501(c)(4) organizations and the IRS controversy directly inspired an article by Time's Michael Grunwald.

Research Assistant, State Fiscal Project, **Center on Budget and Policy Priorities,** DC, 9/2007 – 7/2009

- Contributing writer and editor of a groundbreaking study on state tax expenditure reports; analyzed and graded state reports, created data tables and graphs. Multiple states – including New York – improved their reports as a direct result of the study's findings.
- Developed and populated a comprehensive statistical model to determine the lowest income level at which residents of each state would owe state income taxes, laying the foundation for a first-of-kind 2009 report.

Additional professional and community experience available on LinkedIn.

Education

Web Development Immersive, **General Assembly**, DC. Completed 9/2015
Master of Public Policy, **George Washington University**, DC. GPA: 3.9/4.0. Graduated 1/2011
B.A., Political Economy, **Williams College,** Williamstown, MA. 2x Dean's List. Class of 2004

Selected Skills

Frontend/UI Engineering: TypeScript, JavaScript, Vue 3, React, Nuxt, Next.js, HTML, CSS, SSR, responsive design, accessibility/WCAG & Section 508

UI Systems & Data Visualization: Design systems, component libraries, D3.js, Mapbox, Ag-Grid, SCSS, Storybook

Testing & Application Architecture: Jest, Vitest, Playwright, REST/GraphQL, OpenAPI, web performance, frontend architecture

Full-Stack & Infrastructure: Node.js/Express, Python, Django, SQL, Docker, AWS/ECS/Terraform, CI/CD, npm, Vite, Webpack, Git/GitHub/GitLab

AI-Assisted Development: Claude Code, GitHub Copilot, Claude Design

P**roduct & Leadership:** Product engineering, product management, mentoring, data storytelling, content strategy, technical writing, cross-functional collaboration