

Xi Zhang

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PROFESSIONAL SUMMARY

Frontend-focused Software Engineer with 5+ years of experience architecting high-performance Single Page Applications (SPAs) and complex, data-rich user interfaces. Expert in modern frontend ecosystems including React 19, TypeScript, Vite, and Tailwind CSS. Proven track record of delivering responsive, accessible, and interactive web applications by leveraging state management, data visualization libraries (D3.js, Recharts), and real-time API integrations. Adept at bridging the gap between sophisticated backend AI/data systems and intuitive, 60fps frontend user experiences.

TECHNICAL SKILLS

- **Frontend Technologies:** React (v19), TypeScript, JavaScript (ES6+), HTML5, CSS3, Tailwind CSS 4, Bootstrap
- **Build Tools & Libraries:** Vite, Recharts, D3.js, react-simple-maps, Context API, Framer Motion, jQuery, DOMPurify
- **Architecture & Performance:** SPA Development, Progressive Web Apps (PWA), LocalStorage Sync, UI Memoization, State Management, Responsive UI/UX, Glassmorphism UI
- **Backend & Integrations:** RESTful APIs, Server-Sent Events (SSE), Node.js, Express, Python, Flask, Supabase, Google Gemini API, OAuth/OpenID Connect
- **Version Control & Tools:** Git, Azure DevOps, CI/CD, Agile Methodologies, Lighthouse Auditing

PROFESSIONAL EXPERIENCE

Stout

Associate, Digital & Data Analyst | Irvine, CA | May 2021 - Present

- **Frontend UI/UX Architecture:** Designed and developed intuitive, responsive browser-side user interfaces for multiple enterprise AI applications using JavaScript, jQuery, and Bootstrap, directly increasing analyst self-service capabilities.
- **Real-Time Streaming Interfaces:** Implemented real-time interactive chat interfaces utilizing Server-Sent Events (SSE) to handle streaming API responses, dynamically rendering Markdown, auto-scrolling, and providing smooth UX during high-latency LLM generations.
- **Complex Form Workflows:** Developed advanced scenario configuration UX spanning 11 configurable modules, supporting nested family hierarchies, dynamic multi-select controls, and real-time payload normalization prior to backend submission.
- **Document & File Interactions:** Built seamless file ingestion workflows by integrating Dropzone.js for drag-and-drop asynchronous uploads and PDF.js for native in-browser document viewing and interaction.
- **Frontend Security & Integrity:** Enforced strict frontend security protocols by implementing HTML sanitization using DOMPurify to prevent XSS attacks, and integrating authenticated session flows utilizing Azure AD OAuth and OpenID Connect.
- **Data Visualization & Dashboards:** Created comprehensive operational dashboards aggregating complex dataset metrics to analyze conversion funnels, behavioral user paths, and system engagement data.
- **Cross-Functional Collaboration:** Partnered with data engineering and AI teams to expose advanced graph queries and predictive analytics through intuitive frontend tooltips, progress polling indicators, and detailed UI feedback mechanisms.

PROJECTS

Flux Finance - Fintech Single Page Application (SPA)

- **PWA & Performance:** Designed a high-performance, responsive fintech Progressive Web App utilizing React 19, Vite, and Tailwind CSS, achieving a 95+ Lighthouse performance score across all device form factors.
- **Advanced Data Visualization:** Optimized complex financial dashboard components by leveraging Recharts with custom memoized rendering logic for multi-range historical stock performance, improving interaction fluidity by 40%.
- **Local-First State Management:** Implemented a robust local-first financial state management system synchronizing a Supabase PostgreSQL backend with browser-based persistent storage, ensuring 100% data availability during offline sessions.
- **AI Integration UX:** Engineered seamless natural language interfaces that transform conversational text into categorized financial transactions with real-time UI feedback.

Flux Career - AI-Powered Career Intelligence Platform

- **Modern UI/UX Design:** Engineered a premium React 19 frontend utilizing Glassmorphism aesthetics, atmospheric CSS backgrounds, Lucide React iconography, and custom API routing.
- **Geospatial Visualization:** Delivered high-fidelity career market transparency by implementing a D3-based data visualization layer that integrates live market insights with interactive global maps using react-simple-maps and d3-geo.
- **Asynchronous UX Handling:** Enhanced user retention by developing a state-aware progress-tracking engine that provides granular percentage updates and animated transitions during long-running background document processing phases.
- **Frontend Resilience:** Improved platform fault tolerance by implementing a persistent middleware wrapper that automatically falls back to local-state UI updates when external connections are restricted.

Flux Nutrition - AI-Powered Dietary Tracking Dashboard

- **High-Performance Rendering:** Developed a modern React SPA featuring a clean service-oriented architecture, optimizing frontend rendering to achieve a flawless 60fps interaction rate on data-heavy tracking dashboards.
- **Interactive UI Components:** Crafted a polished, dark-themed interface using Tailwind CSS, incorporating custom interactive bounding boxes for real-time vision-based food logging and portion analysis.
- **Complex State Synchronization:** Managed complex, multi-layered application state using Context API and custom hooks to handle authentication, active plan tracking, and real-time nutritional metric updates without data loss.
- **Client-Side Caching:** Engineered an intelligent in-memory client-side caching layer to reduce redundant network requests, decreasing UI latency by 40% when transitioning between daily log views.

EDUCATION

The George Washington University

Master of Science in Data Science | Dec 2020

University of California, San Diego

Bachelor of Science in Economics | Dec 2017