Roman Stepaniuk

Frontend Developer

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English (B1 – Intermediate) • Ukrainian (Native)

[Telegram](#) • [GitHub](#) • [Portfolio](#) • [LinkedIn](#)

Frontend Engineer with 2.5+ years of experience in building complex, high-performance web and desktop applications using the React ecosystem. Specialized in scalable architecture, strict type safety, and solving engineering challenges that bridge the gap between UI, hardware (Electron), and backend systems.

WORK EXPERIENCE

Python Automation Masters (Frontend Developer) | *Remote*   02/2024 – present

Project: "Tviy Kvytok" (Event Ticketing Platform)

Led frontend development for a high-traffic events platform, establishing engineering culture and optimizing core flows for 2,500+ daily active users.

- Decoupled a legacy monolithic booking module by implementing a React Adapter Pattern for the imperative Seats.io library. Orchestrated bidirectional state synchronization using Zustand, eliminating layout thrashing and preventing unnecessary re-renders
- Engineered a browser-based barcode scanner using ZXing and MediaDevices API. Developed a custom heuristic algorithm to identify and prioritize ultra-wide lenses, solving critical focus constraints on low-end devices and improving scan success rates by 40%
- Built a custom, high-performance calendar interface extending react-day-picker. Integrated windowing techniques (react-virtuoso) to render large schedule datasets, significantly reducing Total Blocking Time (TBT) on mobile devices
- Architected a type-safe, multi-step checkout flow using React Hook Form and Zod. Implemented Optimistic UI patterns for ticket reservation, providing instant feedback while handling server-side validation and race conditions
- Architected a robust quality ecosystem (CI/CD, Static Analysis, Datadog). Enforced strict Code Reviews and mentored the team, cutting regression bugs by ~40%.

Technical Stack: Next.js, TypeScript, TanStack Query, React Hook Form, Zod, Recharts, React Virtuoso, Zxing, Seats.io, Orval, Shadcn/UI

Project: Parking Automation Ecosystem Development of a desktop kiosk (Electron) and an admin panel for parking automation.

Architected a complete frontend ecosystem for a parking platform processing 1M+ UAH monthly, 75K+ sessions, zero downtime. Built desktop apps (Electron kiosk, cashier terminal), PWA admin panel, and deep hardware integration layer.

Technical Architecture:

- Engineered scalable Redux architecture with dynamic slice injection — reduced bundle by 40%, enabling instant startup
- Built custom Redux Listener Middleware orchestrating WebSockets + Electron IPC, eliminating resource leaks in a multi-process architecture
- Implemented type-safe API layer (RTK Query + Orval codegen), preventing runtime errors from API mismatches

Performance & UI:

- Achieved 60 FPS for 10K+ item lists via virtualization during peak hours (2,500+ daily transactions)
- Built a drag-to-select tariff editor with PointerEvents API and optimized geometric algorithms for fluid UX
- Enabled instant client-side PDF reports (html-to-image + jspdf), eliminating 5s server load

Hardware Integration:
- Architected fault-tolerant I/O layer isolating blocking operations (COM, serial) in Node.js child processes — 100% UI responsiveness
- Reverse-engineered CCNET protocol, designed HAL (Adapter pattern) supporting multiple device models
- Integrated native payment systems (Winax) are processing 64% of platform revenue

Development:
- Built UI Kit (Shadcn/UI) — 30% faster feature development
- Implemented CI/CD (GitHub Actions) for cross-platform builds (Windows/macOS)

Technical Stack: React, Electron, Redux Toolkit, TypeScript, TanStack (Query, Router), React Hook Form, Recharts, Orval, Shadcn/UI, Winax, Serialport

SD-Company (Frontend Developer) | *Remote*   06/2023 − 02/2024

Built a white-label Next.js checkout solution with Shopify integration, enabling merchants to customize branding, payments, and analytics without code deployments.

- Architected a dynamic configuration layer allowing real-time customization of UI (branding, colors), payment methods (PayPal, Klarna), and analytics (GTM) through runtime configuration
- Engineered SSR flows with intelligent caching strategies, achieving sub-second load times and optimal Core Web Vitals scores
- Implemented type-safe internationalization system (react-intl) with automatic locale detection and locale-aware routing
- Developed a complex payment form with multi-step validation using React Hook Form and Zod
- Implemented list virtualization for country selection (200+ items), achieving instant rendering performance

Technical Stack: Next.js, TypeScript, TanStack Query, React Window, React Intl, React Hook Form, Zod, Shadcn/UI

EDUCATION

National Aviation University, Kyiv   2023 - present
Faculty of Computer Science and Information Technology

TECHNICAL SKILLS

Languages: TypeScript, JavaScript (ES6+), HTML5, CSS3 (Sass/SCSS)

Frontend: React, Next.js, Redux Toolkit (RTK Query), TanStack (Query, Router), React Hook Form, Zod, Orval, React Window / Virtuoso, Tailwind CSS, Shadcn/UI, Framer Motion, MUI, Ant Design

Backend: NestJS, Electron, WebSockets, Prisma ORM, Type ORM, PostgreSQL, Firebase, SerialPort

Tooling: Vite, Docker, Git, CI/CD, Jest