

# KYRYLO SOTNYKOV

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## Full-stack / React Native Developer

Full-stack engineer with 7+ years in building scalable web and mobile products, from real-time messengers and PWAs to institutional-grade Web3 and Fintech platforms. Combines deep front-end expertise (React, Vue, React Native) with strong backend skills in NestJS, Node.js and PostgreSQL. Experienced in blockchain integrations (Ethers.js, WalletConnect, Solidity, HSM/KMS) and microservice architectures. Leads small teams, optimizes performance and delivers secure, production-ready solutions for high-load, data-sensitive systems.

### CORE SKILLS

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- **Languages:** TypeScript, JavaScript (ES6+), HTML5, CSS3, SCSS
- **Frontend:** React, Next.js, Vue.js, Redux Toolkit, Zustand, Tailwind CSS, Styled Components, Bootstrap, Material UI
- **Mobile:** React Native, Secure Storage, Biometric Authentication (Face ID / Touch ID), WalletConnect, Native Modules (Swift / Kotlin), App Store & Google Play Deployment
- **Backend:** Node.js, NestJS, Express.js, Nx Monorepo, BullMQ, RabbitMQ, WebSockets
- **Blockchain & Web3:** Solidity, Ethers.js, Web3.js, bitcoinjs-lib, BIP-39, Shamir's Secret Sharing, HSM, Custom KMS, Metamask integration
- **Databases & Storage:** PostgreSQL, Redis, Elasticsearch, IndexedDB
- **Architecture & DevOps:** Microservices, Monoliths, Event-driven Architecture, Docker, Terraform, AWS (CloudWatch, EC2, S3), IBM Cloud, Kubernetes, CI/CD (GitLab, GitHub Actions)
- **Testing & Quality:** Jest, React Testing Library, Cypress, e2e & unit testing, ESLint, Prettier
- **Monitoring & Analytics:** Prometheus, Grafana, Sentry, CloudWatch, Microsoft Clarity, Lighthouse
- **Tools & Workflow:** Git, Jira, Confluence, Figma, Agile (Scrum/Kanban), Code Review, Cross-team collaboration
- **Other:** PDF generation (PDFKit), REST & GraphQL APIs, OAuth 2.0, JWT, 2FA (TOTP), Service Workers, PWA, Lazy Loading, Performance Optimization

### WORK EXPERIENCE

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#### Senior Full-stack Developer

##### Guardian Labs (Web3 / Blockchain Products), Ashland, MO, remote, (Aug 2024 – Present)

Delivered B2B blockchain solutions for financial institutions focused on secure asset management, policy-based transaction control, and role-based authorization. Led full-stack development of both web and mobile products, implementing cryptographic systems for key custody, offline signing, and multi-party approvals.

- Designed and implemented Keyper Vault, a non-custodial mobile wallet supporting Polygon, Ethereum, and Bitcoin networks with ERC-20/721/1155 and BTC assets.
- Built secure authentication with email/Google/Apple OAuth, TOTP-2FA, backup codes, and WalletConnect.
- Developed NestJS-based microservices with Nx monorepo, RabbitMQ messaging, PostgreSQL, Redis caching, and Prometheus/Grafana monitoring.
- Configured HSM for key storage and encryption of mnemonics; implemented in-house KMS for development/test environments.
- Built Airlock — a public Web3 platform automating memecoin distribution via configurable smart contracts.
- Delivered MedEx MVP, a tokenization platform for insurance payouts in the US market — developed from scratch to near-production state, including backend, dashboards, and Solidity contracts.
- Wrote and tested Solidity smart contracts for multi-type token issuance, distribution, and automatic USDC redemption.
- Created a GameFi rental service for temporary asset lending with automated payments and returns.
- Implemented signed API request verification using asymmetric cryptography for secure cross-service communication.
- Designed microservices for auth, wallet, transactions, subscriptions, WebSockets, notifications, and uploads.
- Built frontend dashboards in React + Tailwind CSS and mobile apps in React Native, ensuring consistent state management via Redux Toolkit, redux-persist, and live data via WebSockets.
- Integrated Swagger auto-generated TypeScript clients, React Hook Form validation, and error-handling middleware for API calls.
- Set up CI/CD pipelines in GitLab with Docker builds, linting, unit tests, and manual staging/production deployments through Terraform-managed IBM Kubernetes clusters.
- Developed an RPC Proxy in NestJS + Redis to cache blockchain node queries, cutting RPC costs by 3x.
- Monitored stability and transaction flow via Prometheus alerts, Grafana dashboards, and Slack notifications.
- Collaborated in a 9-member cross-functional team (Tech Lead, backend/frontend/full-stack engineers, QA, blockchain developers, PM, designer) under Scrum → Kanban transition.

**Tech Stack:** NestJS, PostgreSQL, Redis, RabbitMQ, Docker, AWS, GitLab CI/CD, React, React Native, Tailwind CSS, ethers.js, web3.js, BIP-39, BullMQ, Prometheus, Grafana, Sentry, CloudWatch, HSM/KMS, Shamir Secret Sharing, WalletConnect, Swift, Kotlin.

## Senior Full-stack Developer

### Lacero Platform Limited (Web3 / B2B Crypto Infrastructure), London, UK, remote, (Oct 2021 – Aug 2024)

Delivered B2B blockchain solutions for financial institutions focused on secure asset management, policy-based transaction control, and role-based authorization. Led full-stack development of both web and mobile products, implementing cryptographic systems for key custody, offline signing, and multi-party approvals.

- Developed a Web3 platform enabling multi-level access for users, managers, and admins — including transaction approval workflows, AML policy enforcement, and role-based dashboards.
- Built the transaction policy module, allowing admins to define whitelisted recipients, transaction limits, time-based rules, and required approval thresholds.
- Implemented offline transaction signing with locally stored, encrypted keys in secure-storage for non-custodial integrity.
- Added biometric verification (Face ID / Touch ID) as mandatory authentication for signing transactions, with PIN fallback.
- Used BIP-39, ethers.js, and web3.js for seed generation, wallet derivation, and transaction handling.
- Designed and deployed a custom Key Management System (KMS) for encrypted mnemonic handling and integrated IBM HSM for production-grade secure key storage.
- Built and maintained core backend services (auth, wallet, approval, policy) within a NestJS monolith, incorporating RabbitMQ for messaging and fault isolation.
- Improved backend throughput using Redis caching and async message queues for stable concurrent performance.
- Automated infrastructure with Docker, GitLab CI/CD, and multi-environment setup for reliable AWS deployments.
- Implemented linting, unit, and end-to-end test gates in CI/CD pipelines to enforce code quality and prevent regressions.
- Integrated Sentry for real-time error monitoring (dashboard and mobile) and CloudWatch for API-level observability.
- Collaborated with the team through mutual code reviews and architecture discussions with the Tech Lead to ensure scalability and consistency across services.
- Developed from scratch the Guardian Groups mobile app — a secure recovery system based on Shamir's Secret Sharing, where 3–5 guardians approve requests to reconstruct sensitive secrets (mnemonics, passwords).
- Built a React Native app with WalletConnect, encrypted mnemonic storage and native Swift/Kotlin integrations.
- Designed and implemented the supporting NestJS API using BullMQ for queueing/retries, Prometheus + Grafana for metrics and logs, ensuring fault-tolerant backend operations.
- Published and maintained the app on public marketplaces, covering the full delivery cycle from development to release.

**Tech Stack:** NestJS, PostgreSQL, Redis, RabbitMQ, Docker, AWS, GitLab CI/CD, React, React Native, Tailwind CSS, ethers.js, web3.js, BIP-39, BullMQ, Prometheus, Grafana, Sentry, CloudWatch, HSM/KMS, Shamir Secret Sharing, WalletConnect, Swift, Kotlin.

## Middle Full-stack Developer

### Nova Poshta Center (Internal Document Management System), Kyiv, Ukraine, remote, (Jun 2021 – Oct 2021)

Developed and maintained the internal electronic document management system for financial and administrative workflows, digitizing approvals and document signing processes across departments.

- Built modules for document generation, digital signing, and authentication in a monolithic Node.js + Vue.js architecture.
- Integrated Cypher API to enable secure Ukrainian e-signature workflows for internal financial acts and documents.
- Automated document lifecycle — from template generation to signature validation and storage.
- Implemented PDF generation and metadata injection based on dynamic business data.
- Ensured secure authorization and streamlined user flow for internal employees (no role hierarchy).
- Managed 2 developers, distributed tasks, and maintained sprint-based delivery to meet deadlines.
- Delivered a separate internal employee directory system using Elasticsearch for advanced search and filtering by manager and department.
- Reduced document approval and processing time significantly after digital workflow adoption.

**Tech Stack:** Node.js, Vue.js, Express, Cypher API, MongoDB, Elasticsearch, REST API, PDFKit, GitLab CI/CD.

## Middle Front-end Developer

### TR Logic LLC (Messaging Platform), Panama City, Panama, remote, (May 2020 – Jun 2021)

Built a real-time messaging platform for public with audio/video calls, group chats, and multi-window communication. Led a 3-member frontend team, overseeing planning, code review, and task distribution.

- Implemented real-time updates using GraphQL Subscriptions and a custom RTC Rust package.
- Built a dynamic message history with infinite scroll and caching for optimized UX.
- Enabled seamless transition of audio/video calls from tab to separate window without connection loss via link query and localStorage.
- Integrated WebRTC-based modules for audio/video streaming and synchronized state updates.
- Collaborated with backend team on GraphQL schema design and API integration.
- Reviewed team code and maintained architectural consistency across components.
- Used internal analytics tools to monitor performance and optimize client behavior.

**Tech Stack:** React, TypeScript, GraphQL (Subscriptions), WebRTC, Redux, TailwindCSS, Rust-based RTC, Webpack, Node.js.

## Middle Front-end Developer

### JuJu Media (3D Real Estate Visualization), London, UK, remote, (Mar 2020 – May 2020)

Developed an interactive web presentation of a high-rise building, allowing users to explore floors, view apartment details, and simulate window views.

- Built dynamic panoramas using Fabric.js with hotspots, markers, descriptions, and pricing.
- Implemented floor selection, apartment filtering, and 3D navigation features.
- Applied lazy loading and dynamic components to handle large textures and improve performance.
- Integrated Clarity heatmaps for early UX feedback and navigation behavior analysis.

**Tech Stack:** Vue.js, Fabric.js, JavaScript, SCSS, Webpack, Clarity.

## Front-end Developer

### MantiCore Development (Car Rental PWA), Odesa, Ukraine, remote, (Dec 2018 – Mar 2020)

Delivered ~10 commercial projects from scratch – landing pages, corporate sites, and a Canadian car-rental platform – growing from static front-end to SPAs and PWA development. Took initiative to build an offline-enabled PWA for internal admin operations, improving reliability and user experience.

- Built responsive web apps using HTML/CSS/JS, jQuery, Bootstrap, transitioning to Vue.js & Nuxt.js
- Developed an e-commerce platform with Nuxt.js + Node.js, LiqPay payments, and CRM integration
- Delivered a PWA for car-rental admin panel with Service Workers, offline cache, and queued API sync
- Implemented vuex-persist for state persistence and IndexedDB caching for offline use cases
- Optimized UX & SEO via Lighthouse audits, WCAG practices, and lazy-loading images (+~15% conversions)
- Tested mobile/offline UX via Chrome DevTools & device emulation; deployed using Gulp pipelines
- Collaborated closely with designers & backend team to ensure rapid, high-quality delivery

**Tech Stack:** HTML, CSS, JavaScript, Bootstrap, jQuery, Vue.js, Nuxt.js, Vuex, Service Workers, IndexedDB, Node.js (Express), LiqPay API, Gulp

## PROJECTS

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**Keyper Vault Custodial Wallet.** Developed a secure custodial wallet mobile app with React Native, NestJS, WalletConnect, and HSM. Optimized RPC requests for 300% faster processing, reduced infrastructure costs 3x, and improved crash rates by 80%. Deployed successfully to App Store and Google Play

**FlowOS B2B Digital Asset Platform.** Built a platform for automated policy-driven transaction approvals using React, NestJS, and Solidity smart contracts. Reduced gas costs by 40%, improved dashboard load times by 60%, and enabled 500+ concurrent users without latency. Delivered 3 months ahead of schedule.

**Open-source Document Verifier.** Created a decentralized application for document authenticity verification on Ethereum and Polygon using Solidity, Hardhat, and React. Enabled users to register and validate proofs on-chain, adopted in open-source community. ([Live Demo](#))

**AI Trip Planner.** Built a web app with Node.js, React, and OpenAI API that generates personalized itineraries from natural language input. Successfully used by travelers to automate trip planning. ([Live Demo](#))

**sign-proof NPM Library.** Published an open-source JavaScript library for cryptographic signing and verifying data off-chain. Lightweight and efficient for Web3 and enterprise use cases, available on npm. ([Package](#))

## CERTIFICATIONS

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**Full-stack Developer**, IBM, 2025

**Generative AI with Large Language Models**, AWS, 2025

**Blockchain Specialization**, University of Buffalo, 2025

## EDUCATION

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**Odesa National Maritime University**, Bachelor's degree, **Business Administration**, 2017 - 2022

## LANGUAGES

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**English** – B2, **Ukrainian** – Native