# Miroslaw Shpak

Product Engineer | Hands-on CTO & Co-founder

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> CTO and hands-on software engineer with 11 years in commercial development and experience leading teams of up to 20. Two companies I helped build were acquired, including one successful exit. Projects I worked on raised $13.75M in total. One DeFi protocol reached about $30M peak TVL, with smart contracts I designed and built.
>
> I like imagining products and taking them from idea to production. I have a good eye for design and branding, and contribute to both. My work also spans hands-on engineering, hiring, fundraising and data-driven validation of product ideas.
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> Main stack: TypeScript/Node.js, Solidity/EVM, Rust/Solana, Three.js/GLSL and Kubernetes/Helm/werf.

## Career timeline

- **Crypto Venture Studio (NDA)**
  CTO & Co-founder · Aug 2023 - Present

  A venture group building and launching betting, exchange and DeFi products, alongside onchain infrastructure for enterprise clients. My work spans technical architecture, hands-on development and hiring, with involvement in product ideas, design and community engagement on selected projects.

  Selected projects:

  - DeFi yield protocol (2025): a non-custodial protocol for liquidity management and yield optimization on Base. Originated the product idea and designed the architecture. Built its smart contracts, backend, offchain automation and infrastructure in a three-person team, and contributed to product design and community engagement. The protocol reached about $30M peak TVL, with investment funds among its users, and was acquired by a decentralized exchange.
  - Onchain betting platform (2026): an onchain DFS betting platform with prediction-market elements, built from scratch. Served as CTO, owning the architecture, all technical decisions and service selection. Built the entire backend and led the team. Chose to build a custom relayer and was deeply involved in the risk system. Developed AI agents for risk monitoring, risk management and settlement of complex betting cases. The project raised $2.5M and holds about $260K in TVL.
  - Early BRC-20 exchange (2024): co-developed the product idea, designed the technical architecture and led the team. The project raised $8M, recorded $5M in cumulative trading volume and held about $150K in TVL. Now winding down as activity in the BRC-20 market declined.
  - Onchain indexing infrastructure (2023): built for enterprise clients. Owned the technical architecture and implementation.
  - AI swap chat (2023): an early AI-powered chat interface for interactive swaps, built with early OpenAI models. Served as Co-CTO, focused on infrastructure, backend and model fine-tuning. Reached about 1,000 daily active users at its peak, then closed due to insufficient demand.

  Stack: TypeScript/NestJS, Vue/Nuxt, React/Next.js, Solidity/Foundry and Rust.

# Career timeline

- **World of Defish / Poolz Finance**

  CTO · Oct 2021 - Aug 2023

  Designed the architecture from scratch when onchain games had few established examples. Built and led a 15-person team delivering web and Unity games, an NFT marketplace, staking and extensive smart-contract infrastructure for the World of Defish ecosystem. Built a custom relayer and a bridge between onchain and offchain systems.

  Worked with technical partners, represented the project publicly and made commitments directly to its community. Contributed to gameplay, design and branding, and helped design the game economy. The game's WOD token exceeded $10M in daily trading volume. The project raised $3M, reached 30K users with about 1K active weekly, and held over $500K in TVL. World of Defish operated for nearly two years before being acquired. It was one of my favorite projects, with a very active community.

  Stack: TypeScript/NestJS, Vue/Nuxt, React/Next.js, Solidity/Hardhat, Three.js, GLSL and C#/Unity.

- **Shuttle Software INC**

  CTO · Nov 2020 - Oct 2021

  Ran my own studio developing dApps, NFT and DeFi products for US clients.

- **Smart Fertilizer (now IPNUK) / Yellow Brick Technologies LTD**

  Technical Lead · Aug 2019 - Jan 2021

  Led an existing 20-person team modernizing a scientific agtech platform. Chose an API layer around a 25-year-old Visual Basic calculation core that could not be rewritten within the project. Designed a microservice architecture around the team's existing Vue/Laravel, .NET and Node.js skills. Worked with scientists on soil analysis, sensor data and satellite imagery. Current product: ipnuk.com.

- **Coelix**

  Head Software Architect (R&D) · Sep 2018 - Aug 2019

  Built systems for Israeli clients: Laravel applications serving peaks of 50K+ concurrent users, Vue-based visual builders, React Native apps and the supporting infrastructure.

- **Quarnuts**

  Full-stack Developer · Jun 2016 - Aug 2018

  Developed systems for major Ukrainian enterprises using Vue/Laravel, WordPress and Drupal. Worked on a C++/Unreal Engine 4 VR apartment showroom for Foxtrot.

- **Agroinvestgroup / Freelance**

  Early career, before Quarnuts

  Six months developing C/C++ software for STM32 controllers in an agricultural sorting terminal. Also worked as a freelance web developer using WordPress, Drupal and Laravel.

Other concurrent roles: B2D, Co-founder/CTO (Jul-Oct 2021, part-time).

# Domains & current focus

Approximate experience; domain periods overlap.

| Domain | Experience | Work |
|---|---|---|
| **Blockchain / DeFi** | 5 years | EVM and Solana contracts, exchanges, non-custodial protocols, relayers and indexers. |
| **Betting / Gambling** | 1 year | Onchain betting, a custom settlement engine, risk management, vault security and operations automation. |
| **Gamedev** | 2 years | Web and Unity games, NFT marketplaces, Three.js and GLSL shaders. |
| **Agriculture / Food Tech** | 1.5 years | Scientific calculations, soil analysis, sensors and satellite imagery. |
| **Hardware / IoT** | 6 months | C/C++ software for STM32 controllers in an agricultural sorting terminal. |
| **AI / Agentic Ops** | Production use | Monitoring, risk management, settlement and internal tools with MCP and RAG. Automated CI/CD with agents for testing, deployment and post-deployment monitoring. |

## My AI stack & open source

pi with PI-GPUI, an editor I built for pi users (yes, you can call it "niche"). Mostly Claude for coding and design; OpenAI for research and code review. Also work with local models, tool calling and multi-agent orchestration.

Open-source work includes web3-token for wallet authentication, chain-syncer for EVM event synchronization, and PI-GPUI. About 400 GitHub stars combined.

## Engineering toolkit

Backend: TypeScript/Node.js, MongoDB, PostgreSQL and Redis. Frontend: React/Next.js, Vue/Nuxt and React Native. Contracts: Solidity/Foundry and Rust/Solana. Infrastructure: Kubernetes, Helm, werf, Docker, GitOps and CI/CD. Also C/C++ from the good old days, Unreal Engine and Three.js. I love making something beautiful with GLSL shaders.

## Current interests

- Agentic Ops.
- Military tech. Served as a sergeant in Ukraine's Armed Forces during the war.
- Betting and prediction markets.
- Blockchain.
- AR/VR, shaders and games.

Giterminism and transparency cultist.

Senior/Staff Product Engineer, Tech Lead or hands-on CTO. Open to remote, hybrid or onsite work and relocation. Polish JDG; full-time employment or long-term B2B.

BSc, Computer Science · Odesa Polytechnic National University · 2017 - 2019

English: C2 / fluent. Ukrainian and Russian: native.