Oleh Misarosh | Fullstack & Smart Contract Engineer

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With a **5-year track record in software engineering** and **4 years in Blockchain**, I excel in **DeFi protocol design, applied cryptography** and **backend engineering**. My expertise encompasses creating and managing **production-grade smart contracts & infrastructure** for backend and DeFi applications, including asset storage, trading, staking, lending and cross-chain bridging. I am also a dedicated ZK engineer, actively engaged in privacy ecosystems.

Key Achievements

- Co-founded, developed, marketed and created ad sets for familytable.co using only AI agents.
- Engineered an AA wallet across the stack(smart contract, paymaster, bundler, sdk) that secured assets of **more than 25k users**. Features self-custody, per-user **upgradeability**, gas abstraction, DeFi integrations, social recovery and Google Authenticator (HOTP) recovery. Multi-chain deployment (create2) on **Polygon, BNBChain, zkSync, Ethereum, Harmony.** Powers pierwallet.com and muuvr.io.
- Led the fundraising, development and marketing for nemi.fi, reaching **8k followers on X** and **thousands of users** on a private testnet.
- Engineered an **MPC threshold signature** wallet and backend for BTC & ETH. Powers bitwala.com.
- Led the EVM development of the messina.one (Algorand <> Ethereum) bridge.
- Led the blockchain integration into Microsoft Sharepoint for hlb.global.

Technical Skills

- **Languages:** Solidity (4 years), Typescript (6 years), JavaScript (6 years), Rust (5 years), Python (4 years), Noir (2 years).
- **Development:** NodeJs, React, Forge, Hardhat, Alloy, Viem.
- **Cryptography:** ZK, cryptography, private/public key, hashing, signing, encryption, merkle proofs, etc.
- **Security:** reentrancy, flash loan attacks, frontrunning, replay attacks etc.
- **Upgradeability:** proxy contracts, deploying, upgrading, storage layout management, diamond patterns.
- **Monitoring:** CI/CD, Tenderly, the Graph, Envio, Github actions.
- **Security analysis**: Slither, Foundry Fuzzing, Unit Testing, AI (Claude) Skills.
- **DevOps:** AWS, Vercel, Railway, Render, Cloudflare, Google Cloud Platform, Docker.

Experience

Shield Labs | Co-founder and Lead Smart Contract Engineer | January 2025 - Present

- nemi.fi - a private DEX on Aztec.
    - Designed & developed Solidity and Noir(ZK) smart contracts for AMM and RFQ orders.
    - Led the fundraising for the project. Co-led the marketing, reaching 8k X followers and thousands of users.
- Mezcal - an on-chain dark pool:
    - Developed a super performant on-chain dark pool based on ZK MPC technology.
    - Powered by an in-house app-chain.
- Other R&D projects include: zk-login, zk-email, zk-webauthn, zk-regex, storage-proofs, tee-rex.

NDA | Lead Smart Contract Engineer | August 2025 - November 2025

- Designed and implemented a swap, earn, borrow platform for a Malaysian Stablecoin: MYRC.
    - Implemented, tested and fuzzed a Prop AMM smart contract based on an AggregatorV3Interface oracle.
    - Integrated, tested and fuzzed Morpho Blue for earn & borrow functionality.
    - Passed an external security audit.

Career Break | October 2024 - December 2024

- Taking a break to catch up with new technologies in the web3 space and decide next steps.

Pier Wallet | Lead Smart Contract & Fullstack Engineer | January 2022 - September 2024

- Designed, developed and deployed an AA wallet (smart contracts, paymaster, bundler, sdk). Powers pierwallet.com and muuvr.io.
    - Developed an upgradeable smart contract wallet implementation (upgraded 5 versions to date).
    - Secured assets of **more than 25k users** on Polygon, BNBChain, zkSync, Ethereum, Harmony.
    - Implemented an onchain recovery using guardians and/or Google Authenticator (HOTP).
    - Developed a paymaster contract for gas abstraction and a 99.99% uptime bundler for user ops.
    - Integrated 0x API for swaps, CovalentHQ for tx history.
- Developed an MPC threshold signature wallet for BTC & ETH. Powers bitwala.com.
    - Implemented an MPC server in nodejs.
    - Implemented a JS SDK for 3rd party integration.
- Designed and developed a passkey wallet (Webauthn.sol) for postfinance.ch.
    - Developed an account abstraction wallet based on Webauthn.sol.
    - Developed backend and SDK for the interface integration.

Espeo | Lead Smart Contract Engineer | October 2021 - February 2022

- Developed the staking smart contract for gamerhash.com. Successfully passed an external audit.
- Developed and improved smart contracts that enabled shared-ownership for NFTs. Tested, audited and optimised the diamond proxy architecture.
- Led the EVM development of the messina.one (Algorand <> Ethereum) bridge.

1000Geeks | Smart Contract Engineer | March 2021 - November 2021

- Developed ERC-20/BEP-20 tokens with tight Uniswap integration.
- Designed and led the development of a synthetic stablecoin pegged to the price of 1sq meter of real estate in Paris.

42 Coffee Cups | Fullstack engineer | May 2020 - February 2021

- Maintained websites for concierto.cloud and accruent.co.uk.

Hackathons

ETHRome - Aztec Track Winner | October 2024

- PROLS - bring offchain/cross-chain liquidity to the Aztec Network. Presentation, Github.

Education

Academic Education

- Bachelor of Computer Science. Lviv Polytechnic National University, Ukraine (2019 - 2023).

Publications

- Bringing zkLogin to Ethereum with Noir - presented at NoirCon 0.
- zkEmail account in Noir - self-custodial “Sign-in with Google” on Ethereum.
- The Encrypted Money Market - tradeoffs of designing an encrypted money market on a private blockchain.