ALEX SHERBUCK

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PROFILE

Senior Protocol Engineer and Engineering Lead with 10+ years of full-stack development and 7+ years of production smart contract experience. Specialized in architecting secure, scalable distributed protocols, public-facing platforms, and AI-assisted engineering workflows. Track record of shipping high-traffic systems handling millions in volume, leading engineering teams, and delivering mission-critical products across government, blockchain, and enterprise environments. Passionate builder in web3 since 2012.

TECHNICAL SKILLS

AI & LLM Engineering: Google Gemini, prompt and context engineering, structured outputs, conversational intake, form prefilling, evidence-grounded signal extraction
Agentic Workflows: OpenAI Codex, Model Context Protocol (MCP) server development, tool-based intake, custom Codex skills, AI-assisted implementation and code review
AI Evaluation & Safety: Adversarial testing, prompt-injection defenses, schema validation, deterministic guardrails, routing evaluations, LLM observability
Smart Contracts: Solidity, EVM internals, ERC-20/721/1155, OpenZeppelin, UUPS/Beacon Proxy patterns, Foundry, Hardhat, Slither, Echidna, formal verification
Blockchain: Ethereum, Bitcoin, Solana, L2s (Abstract, ZKVM), cross-chain deployments, protocol design, gas optimization, security audits
Languages & Frameworks: JavaScript, TypeScript, Node.js, React, Next.js, NestJS, Web3.js, Ethers.js
Infrastructure: AWS (S3, EC2, Lambda), Vercel, Docker, PostgreSQL, MongoDB, IPFS, Cloudflare Workers

PROFESSIONAL EXPERIENCE

U.S. Department of the Treasury — TSCS Engineering Lead, Fraud Team May 2026 – Present

- Lead a four-person AI engineering team developing Fraud.gov, owning technical architecture, engineering execution, and delivery strategy for a federal fraud-reporting platform.
- Coordinated with DOJ's National Fraud Enforcement Division to deliver 42,000+ leads in real time from members of the U.S. public submitting reports through America.gov/fraud.
- Led engineering delivery of Fraud.gov in support of the White House Task Force to Eliminate Fraud; the platform was publicly announced by the President in the Oval Office.
- Coordinated with the Department of Homeland Security to report leads involving suspected voter fraud; coordinate with consumer fraud agencies to prepare the next phase of the platform.
- Translate policy, investigative, and operational requirements into engineering milestones, manage technical risks, and coordinate delivery with government, product, and security stakeholders.
- Mentor engineers, review system designs and production code, resolve technical blockers, and establish standards for security, privacy, accessibility, reliability, and maintainability.
- Introduced an AI-assisted development workflow using OpenAI Codex to accelerate implementation, testing, code review, documentation, and issue resolution.

MagicEden.io — Lead Protocol Engineer Jul 2024 – Mar 2026

- Engineering DRI for Magic Eden's Embedded Wallet product supporting 150,000+ active users across multiple chains.
- Architected and deployed LuckyBuy smart contract generating $350,000 profit in its first 100 days, with 36,636 transactions and 1,700 ETH in volume.
- Designed and maintained Ethereum Packs NFT Ripping contract enabling secure on-chain pack mechanics for digital collectibles.
- Built an on-chain PRNG protocol for provably fair gaming randomness and architected the Magic.Fun bonding curve with Uniswap AMM integration.
- Led cross-chain deployment strategy for Abstract Network and ZKVM, enabling uniform contract addresses and seamless multi-chain operations.

- Contributed to MagicDrop Launchpad ERC-721/1155 contracts powering Magic Eden's token launch platform.
- Designed and conducted technical interviews; mentored and onboarded new protocol engineers.
- Managed integrations with Dynamic, Turnkey, Alchemy, and ZeroDev, optimizing performance and cost efficiency.

PlayerAuctions.com — Full Stack & Solidity Developer Apr 2023 – Jul 2024

- Architected cross-chain smart contract infrastructure using the UUPS Beacon Proxy pattern, ensuring consistent multichain addresses and reducing deployment gas costs by 90%.
- Integrated Seaport Protocol for NFT marketplace operations, managing order-book systems processing $10M+ in monthly listing volume.
- Built a real-time blockchain monitoring and indexing system for smart contract events, reducing transaction confirmation delays from minutes to seconds.
- Developed a secure token deployment pipeline for ERC-20/721/1155 contracts using Slither and Echidna security analysis.

ConsenSys — Senior Blockchain Developer Dec 2021 – Jan 2023

- Core contributor to Ganache and Truffle developer tools used by 100,000+ Ethereum developers globally.
- Implemented the EIP-1559 RPC API feeHistory endpoint, enabling accurate gas-fee estimation for Ethereum's Merge upgrade.
- Built a Cloudflare Worker API and semantic-version checking system for developer tooling infrastructure.

UNICEF — Full Stack Web & Solidity Developer, New York, NY 2018 – Dec 2021

- Led full-stack development for the UN CryptoFund public platform, facilitating $13M in blockchain investments and global partnerships.
- Delivered three internal UN products from concept to production for Department of Finance investment-tracking needs.
- Mentored 20+ blockchain cohort companies as primary technical advisor for the UN Office of Innovation accelerator program.

Airbus — Full Stack & Solidity Developer, Project Executive, Sunnyvale, CA 2018 – 2019

- Led a four-member team developing an enterprise Ethereum NFT solution for supply-chain applications, including smart contracts, a Web3 library, and a dApp.
- Delivered a blockchain platform that reduced technology-adoption risk and accelerated open-source ecosystem development.

BitPay — Full Stack Web Developer & Blockchain Engineer, Alpharetta, GA 2017 – 2018

- Contributed to payment-platform infrastructure serving millions of cryptocurrency transactions.
- Participated in the Bitcoin Segwit2x scaling initiative as one of four core developers.

Earlier Experience: Branding Brand (Full Stack Developer, 2016–2017); UPMC (Multiple Positions, 2012–2016)

PROJECTS AND OPEN SOURCE

Truffle/Ganache Ethereum SDK — Core contributor to industry-standard Ethereum development tools (2020)

St. Jude Crypto Campaign — Built infrastructure supporting $9M+ raised in cryptocurrency donations (2019)

CrafterVerse — Winner, Best NFT Implementation (2022)

MetaAuth — Open-source MetaMask signature-based authentication library (2018)

EDUCATION AND CREDENTIALS

B.S. Information Science — University of Pittsburgh

United States Marine Corps — Reservist Military Police, Honorable Discharge

Certifications — B9 Labs ETH-18 Certified Ethereum Developer • Linux Foundation Hyperledger for Business