

SUNANDA VEMPATI

Blockchain Consultant | Smart Contract Architect | DeFi & RWA Specialist

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PROFESSIONAL SUMMARY

Blockchain Consultant and Smart Contract Architect with 16+ years of overall IT experience and 7+ years of hands-on blockchain development. Experienced in designing, developing, testing, auditing, and deploying secure smart contracts across EVM and Solana ecosystems. Strong specialization in DeFi protocols, stablecoins, lending and borrowing, real-world-asset tokenization, dynamic NFTs, multi-chain token infrastructure, deterministic deployments using CREATE2, wallet integrations, and enterprise Web3 architecture. Comfortable leading technical discussions, mentoring developers, working with cross-functional teams, and translating business requirements into production-oriented blockchain solutions.

CORE TECHNICAL EXPERTISE

Blockchain & Smart Contracts	Solidity, Rust, Smart Contract Architecture, EVM, Solana, OpenZeppelin, Web3.py, Ethers.js
Token Standards	ERC-20, ERC-721, ERC-1155, ERC-3643, ERC-4907, ERC-5218, LayerZero OFT
DeFi & RWA	Stablecoins, Lending/Borrowing, Staking, Vesting, Liquidation Mechanisms, Real Estate Tokenization, Compliance-Ready Assets
Security & Quality	Slither, MythX, Mythril, Security Reviews, Vulnerability Analysis, Testing, Gas and Contract Optimization
Multi-chain & Wallets	Ethereum, Avalanche, Polygon, Arbitrum, Base, Solana, EVM Networks, CREATE2, Bridging, Fireblocks, MetaMask, Phantom
Development & Infrastructure	Hardhat, Truffle, Remix, Ganache, JavaScript, Node.js, Python, Java, Flask, PostgreSQL, MySQL, GitHub, GitLab
Enterprise & Delivery	Technical Leadership, Technical Consulting, Mentoring, SDLC, DApp Integration, API Design, Documentation, Stakeholder Communication

PROFESSIONAL EXPERIENCE

Blockchain Consultant | AppMindsGlobal | May 2026 – Present

- Provide blockchain consulting, architecture and hands-on engineering for token infrastructure engagements, from requirement clarification through deployment and handoff.
- Architect and deliver token infrastructure covering token deployment, bridging, vesting and staking.
- Design multi-chain token architecture across EVM networks and Solana.
- Own deployment planning, deterministic deployment, contract verification and audit handoff.
- Bring security considerations into design reviews and advise on RWA and token-infrastructure design decisions.

Lead Blockchain Developer | G Future Tech | Oct 2024 – Jul 2026

- Led smart-contract architecture and implementation for RWA and real-estate-linked tokenization and stablecoin initiatives.
- Designed compliance-ready token infrastructure using ERC-3643 concepts and supporting identity, registry, compliance, and transfer workflows.
- Worked on multi-signature wallet architecture, Fireblocks integration, treasury and transfer-vault flows, and role-based operational controls.
- Designed and deployed multi-chain token infrastructure using deterministic addressing and CREATE2-based deployment patterns.
- Conducted smart-contract reviews, audit preparation, security validation, testing, and deployment verification across supported networks.

- Collaborated with backend, wallet, compliance, and product teams to connect smart contracts with operational APIs and user workflows.

Smart Contract Manager | Maavatar | *Dec 2024 – Feb 2026*

- Designed and implemented on-chain identity and AI-avatar infrastructure for a Web3 digital identity platform.
- Developed ERC-1155-based dynamic NFTs with mutable or upgradeable metadata and identity-evolution logic.
- Worked on interoperability across NFT, DeFi, and DAO-oriented components while maintaining contract security and scalability.
- Collaborated with product and engineering stakeholders on blockchain architecture, deployment planning, and technical delivery.

Senior Blockchain Developer | Brane Enterprises Pvt. Ltd. | *Aug 2022 – Nov 2024*

- Designed and implemented enterprise-grade Solidity smart contracts and translated contract logic into the Natural Solution Language (NSL) framework.
- Built automated contract-generation, validation, and deployment-oriented workflows.
- Reviewed and audited smart contracts using Slither, MythX, and Mythril, identifying security and quality issues before release.
- Validated NSL-generated solutions for functional correctness, industry standards, security, and efficiency.
- Developed and integrated DApps, supported testing, and mentored team members on blockchain concepts and engineering best practices.

Blockchain Developer | G Future Tech Pvt. Ltd. | *Apr 2021 – Aug 2022*

- Developed and tested Solidity smart contracts for stablecoins and related Web3 use cases across EVM-compatible networks.
- Implemented or supported use cases involving NFTs, remittance, launchpads, lending and borrowing, and gaming applications.
- Worked with Remix, Truffle, Hardhat, MetaMask, and JavaScript-based Web3 integrations.
- Performed security reviews and contract optimization using Mythril, MythX, and Slither.

Blockchain Developer | Zeromile Research & Development LLC | *Feb 2021 – Mar 2021*

- Developed ERC-20 token contracts for Ethereum and tested deployments on the Ropsten test network.
- Designed a factory smart contract for a dual-token liquidity pool and staking workflow.
- Collaborated with UI developers to integrate DApp interfaces with smart-contract functions.

Blockchain Intern | ThynkBlynk Technologies | *Sep 2020 – Dec 2020*

- Developed and deployed Solidity smart contracts on Ethereum using the .NET ecosystem and supporting Web3 tooling.

IT Support Engineer | MAPS Investments FZ LLC, Dubai | *Dec 2014 – Apr 2015*

- Maintained online forex and commodities trading portals, supported website updates, prepared client transaction reports, and managed portal content.

IT Support Engineer | Octagon International, Dubai | *Jan 2014 – Nov 2014*

- Performed website testing, coordinated corrections with designers, installed and configured operating systems and applications, and maintained IT systems.

Software Testing Engineer | Diodes IT Services, Dubai | *Dec 2012 – Dec 2013*

- Performed functional, performance, system-integration, and user-acceptance testing, including metrics collection and process-data validation.

Software Testing Engineer | Infosys Limited, Hyderabad | *Jul 2008 – Sep 2011*

- Supported CMMI Level 5 implementation activities within the IT department.
- Performed metrics collection, process-data validation, and user-acceptance testing of internal applications.
- Worked with HP Quality Center and QTP-related testing processes.
- Received a Unit Level Outstanding Performance Award (H1 2010–2011) for contributions to knowledge management, training, tools, and employee engagement.

SELECTED BLOCKCHAIN PROJECTS

RealProton – Compliance-Ready RWA Tokenization

- Worked on an ERC-3643-oriented real-estate tokenization platform with identity, claim-topic, registry, compliance, and controlled-transfer components.
- Supported token classes and jurisdictional transfer restrictions, including whitelisting, identity validation, locking rules, agent permissions, and administrative transfer operations.
- Contributed to Fireblocks-based wallet architecture involving treasury, transfer-vault, issuer, legal, and multisignature operational flows.
- Participated in audit preparation, test-coverage reviews, bug-summary reporting, redeployment, verification, and Avalanche-based deployment activities.

USDAO / HydraLend – Stablecoin and DeFi Infrastructure

- Designed and refined architecture for a USD-pegged, real-estate-linked stablecoin and related DeFi infrastructure.
- Worked on overcollateralized lending and borrowing concepts, collateral-ratio controls, liquidation and recovery mechanisms, and multi-collateral protocol design.
- Explored cross-chain infrastructure, oracle integration, reserve monitoring, and operational controls for a payment- and settlement-oriented stablecoin ecosystem.

Maavatar / Maavi – On-Chain AI Digital Identity

- Developed ERC-1155 dynamic NFT infrastructure for AI-driven avatars and evolving on-chain identities.
- Worked on NFT tiers, mutable metadata, wallet connectivity, and interactions among NFT, DeFi, and DAO components.

RBC / FRK – Multi-Chain Token Infrastructure

- Deployed and validated token infrastructure across multiple EVM networks using deterministic CREATE2-based addressing.
- Worked on ERC-20, bridge, and LayerZero OFT-oriented architecture, deployment automation, verification, and audit handoff activities.

Decentralized Rights Management System

- Built a decentralized digital-rights platform using ERC-5218 and ERC-4907 for transferable rights and time-bound NFT rentals.
- Implemented rights transfer, leasing, revocation, IPFS metadata, UI integration, and security controls.

Ethereum NFT Marketplace

- Developed ERC-721 marketplace functionality for minting, listing, fixed-price sales, auctions, wallet integration, IPFS metadata, royalties, and anti-reentrancy testing.

Ethereum-Backed Stablecoin with Governance Token

- Developed an overcollateralized ETH-backed stablecoin with governance-controlled parameters, collateral management, liquidation triggers, and Chainlink oracle integration.

Stablecoin Staking Protocol

- Implemented staking, reward calculation, withdrawal, proportional distribution, and security-review workflows for a stablecoin staking protocol.

JSON-to-Solidity Translator and Deployment System

- Built a Python/Flask and Web3.py system that converted JSON-defined contract structures into Solidity, generated deployment scripts, and exposed APIs for contract interaction.

EDUCATION

- Quantum Computing (in progress) | Indian Institute of Science (IISc), Bengaluru
- PG Diploma in Software Development – Blockchain Specialization | IIIT Bangalore & upGrad | May 2019 – Jul 2020
- PG Diploma in Management | Indira Gandhi National Open University | Dec 2009 – Apr 2012
- B.Sc. in Mathematics, Physics & Electronics | Osmania University, Hyderabad | Jun 2005 – Apr 2008

TRAINING & CERTIFICATIONS

- Complete Course on Understanding Blockchain Technology – Udemy
- Decentralized Finance (DeFi) Primitives – Coursera
- Blockchain Bootcamp: Build Enterprise Applications with Hyperledger Fabric v2 – Chainstack
- Blockchain Technology & Its Applications – Webinar, Dr. M.G.R. Educational and Research Institute
- Can Blockchain Save Our Cities – Webinar, IEEE Computer Society Kerala Chapter

ADDITIONAL INFORMATION

Professional interests: Quantum Computing, Agentic AI for Web3, AI-assisted KYC/AML and wallet-risk workflows, RWA lending, cross-chain interoperability, and blockchain education content.

References: Available upon request.