

Rajat Kumar

rajatwasan@duck.com | +1 850 966 2473 | EST

[in /in/wasanrajat](https://www.linkedin.com/in/wasanrajat) | [G /rajatwasan](https://github.com/rajatwasan) | <https://rajatwasan.github.io>

SUMMARY

Lead Software Engineer specializing in blockchain and cybersecurity, now exploring Layer 1 and Layer 2 protocol development. Expert in blockchain application design and implementation, with a focus on Ethereum, smart contract security, and scaling solutions for enhanced efficiency and interoperability. Proven in driving operational and security enhancements through innovation and leadership.

EXPERIENCE (5 YEARS)

ZONIQX | LEAD SOFTWARE ENGINEER

June 2023 – August 2023 | California, US

- Led the creation of ERC 7518, setting a new standard for Ethereum-based security tokens like real-world assets (RWAs), bonds, and funds.
- Introduced flexible compliance and the concept of semi-fungible token partitioning to modernize digital finance.

REALTO (ZONIQX INDIA) | CTO

July 2019 – August 2022 | Bangalore, India

- Successfully launched Versions 1 and 2 of a SaaS application, serving numerous clients with assets exceeding \$4.5 billion on the platform.
- Directed the architectural design and development of technical solutions for Ethereum smart contracts and backend applications for Realto, culminating in the successful launch of a marketplace.
- Led the strategic optimization of AWS infrastructure with docker containers and managed services, achieving a 40% cost reduction while maintaining 99.9% operational uptime.
- Implemented robust test case and security protocols, leading to the passing of two independent smart contract audits and security assessments, audited by certik with 85% code security.
- Crypto wallet integration for minting, and transfer of security tokens in blockchains like Ethereum, XRP, Solana etc
- Developed a cutting-edge, high-throughput indexer designed to harness the full capabilities of analysis tools, specifically tailored for on-chain data.

COGNIER INSIGHTS PVT. LTD | SENIOR BLOCKCHAIN ENGINEER

July 2017 – July 2019 | Hyderabad, India

- Conducted comprehensive research on blockchains, and L1 and L2 networks, delivering technical information for leveraging blockchain in healthcare record management, ensuring secure and efficient patient data handling.
- Developed blockchain-based land records on Sawtooth Ledger, improving data integrity and launching an investment model with 1000+ investors.
- Created time and counter-based security keys on Hyperledger Fabric, cutting unauthorized access by 70%.
- Optimized Samplepop's Geo map marker to achieve high throughput and low latency, enhancing load time from 8 seconds to under a second

SKILLS

BLOCKCHAIN: Ethereum (L1 and L2s) • Smart contract Security • Security Audits

PROGRAMMING LANGUAGES: GoLang • Python • Typescript • Node.js • Solidity • C/C++ • Javascript

DATABASES: BigChainDb • MongoDB • Sql

LIBRARIES/PROTOCOLS: Truffle • Web 3.0 • IPFS • Tensorflow

CONTAINER, AND CLOUD: Docker • Github • Amazon Web Service

SECURITY: Blockchain Security • Threat Modeling • Security Practices

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EDUCATION

FLORIDA STATE UNIVERSITY | MS (THESIS) IN COMPUTER SCIENCE

Graduate Assistant in Teaching

Aug 2022 - May 2024 | FL, United States

- Conducted in-depth research on major security risks and security assessments in blockchain technologies,
- Exploring advanced cryptographic methods to enhance blockchain security products against quantum computing threats.
- Conducted in-depth research into Ethereum's scalability challenges and investigated advanced solutions, including zkSync, rollups, and micro-rollups, to enhance network efficiency and transaction throughput.

KURUKSHETRA UNIVERSITY | BACHELOR OF TECHNOLOGY (HONORS) IN COMPUTER SCIENCE

Aug 2013 - June 2017 | Haryana, India

- Served as a proactive representative for the Entrepreneurship Development Cell, IIT Delhi at Kurukshetra University
- Creation of wallet module for secure storage of different crypto and tokens
- Collaborated with faculty members to mentor students in cutting-edge fields like programming, crypto, deep learning, natural language processing, and Distributed system
- Secured the coveted first position in the Young Scientist event at Ignite Tech Fest 2014, showcasing an innovative engineering project

PROJECTS

Realto App

B2B SaaS financial service provides product offerings in the marketplace for Asset-Backed Tokens

Outpace

Connector Components for No-Code Platform, providing seamless integration of various services and Rest APIs without the need for coding expertise

MedCryp

EHR Dapp and web based pplication for Secure storage and sharing of Medical Records

Secure file sharing

P2P customer facing Application with Enhanced Security. Includes key management based on time and count.

Ownet

Revolutionizing Real Estate with a Subscription-Based Digital Platform

Object detection and analysis

RetailVision: Enhancing Retail Customer Segmentation with AI-Driven Object Detection