

# GOKULESHWARAN NARAYANAN

Chengalpattu, India | gokulnpc@gmail.com | +91 7904747092 | GitHub: gokulnpc | LinkedIn: gokulnpc



## EDUCATION

<b>Vellore Institute of Technology, Vellore, India</b> Bachelor of Technology in Computer Science and Engineering with specialization in Information Security. (Branch Topper)	<b>Expected: May 2024</b> (CGPA 9.25/10)
<b>Chettinad Vidyashram, Chennai, India</b> 12th Grade CBSE (96.2%) (Class Topper)	<b>2018 – 2020</b>
<b>Maharishi Vidya Mandir, Chengalpattu, India</b> 10th Grade CBSE (97.8%) (School Topper)	<b>2013 – 2018</b>

## PROFESSIONAL EXPERIENCE

<b>StreamNFT, Bangalore, India</b> <i>Solidity Developer Intern</i> StreamNFT is building a scalability layer for NFTs to enable liquidity for a more accessible and interoperable Web3 future. <ul style="list-style-type: none"><li>Developed and implemented an SDK toolkit enabling seamless interaction with smart contracts across 5 blockchains (Polygon, Mantle, Hedera, Telos, Solana); enhanced cross-chain interoperability.</li><li>Coded two smart contracts in Solidity to enhance the utility of NFTs for loans and rentals, thereby elevating their liquidity features.</li><li>Identified errors in smart contracts, wrote 148 test cases spanning 3,000+ lines, and tested on Sepolia Testnet and a personal blockchain.</li><li>Transitioned from a 2-month internship to part-time, tasked with optimizing smart contracts to the diamond pattern to introduce upgradability features.</li></ul>	<b>May 2023 – Present</b>
<b>Aquaria Solutions, Hyderabad, India</b> <i>Blockchain Developer Intern</i> A consultancy offering digital solutions for SMBs and Enterprises, with strengths in product development, technology consulting, and agile delivery. <ul style="list-style-type: none"><li>Led a team of three in developing backend servers for multiple blockchain networks using JavaScript and Solidity, and actively contributed to the contract development and deployment on the mainnet.</li><li>Designed an optimized smart contract for the "View Token" application, maintaining transaction fees of \$0.00091 - \$0.015 USD on both client and server sides, enhancing sustainability for high-volume transactions.</li></ul>	<b>April 2023 – May 2023</b>
<b>Skill Vertex, Bangalore, India</b> <i>Cyber Security Intern</i> An edtech firm offering tailored upskilling and training programs for students and professionals, aligned with their future aspirations. <ul style="list-style-type: none"><li>Completed a cybersecurity training program, participating in live projects and gaining hands-on experience in identifying and mitigating threats using tools like Wireshark and Kali Linux.</li><li>Acquired practical knowledge in ensuring compliance with data protection regulations and standards, and deepened my understanding of configuring and managing firewalls, VPNs, and other pivotal security tools alongside the team.</li></ul>	<b>October 2022 – November 2022</b>

## ACADEMIC PROJECTS

<b>BlockComm: Decentralized Messaging Exchange System </b> <ul style="list-style-type: none"><li>A decentralized messaging platform created with smart contracts. Leveraging blockchain technology, it guarantees message security and thwarts unauthorized alterations.</li><li>Designed a user-friendly interface with the React framework and integrated Metamask provider, allowing users to seamlessly connect their wallets for enhanced user experience.</li><li>Tested the contract rigorously with tools like Ganache and Hardhat before deploying on the Goerli Testnet.</li></ul>
<b>NFT Music Access Platform </b> <ul style="list-style-type: none"><li>The NFT Music Access Platform is a music player that uses blockchain to facilitate direct interactions between artists and fans, offering unique content and experiences.</li><li>Music is encrypted with the buyer's public key and stored on IPFS, ensuring only the buyer can access it with their private key.</li><li>The platform supports artists by enabling them to earn from NFT sales, with smart contracts handling royalties and measures in place to deter piracy.</li></ul>

## NFT Web3 Marketplace

- A personal project developed to explore the intricacies of web3 applications. The NFT marketplace uses React for the frontend, and a combination of JavaScript, Node.js, and Ether.js for the backend. Solidity contracts were deployed on the Goerli Testnet, with IPFS handling NFT metadata storage.
- The project served as a practical exploration into various frameworks including Hardhat, Truffle, Metamask, NFT.Storage, Ganache, and Remix.

## HealthGuard: Precision Disease Prediction System

- HealthGuard is a precision-focused disease prediction system developed by a team of three.
- Utilizing Python for the backend and HTML/CSS for the frontend, the system employs XGBoost, achieving an impressive accuracy of 99.4% in disease prediction. This project underscores the transformative role of machine learning in healthcare.
- Utilized Google Colab for efficient development and testing, facilitating seamless team collaboration.

## PAPERS

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- **Enhancing Industrial IoT Network Security through Blockchain Integration (MDPI PEER REVIEW):** This research introduces a novel approach to enhance Industry IoT network security using blockchain. It involves data collection, compression, encryption, and classification, followed by storage in the cloud or IPFS. Data authenticity is ensured through PoA, and IoT devices access data securely with ZKP verification.
- **Role of Blockchain Technology in Supply chain management (IEEE PEER REVIEW):** This research examines blockchain's role in enhancing supply chain management. It focuses on how blockchain's transparency and immutability improve product tracking and authenticity verification.
- **Hybrid Cloud Security System Using Blockchain and Machine Learning (UNDER REVIEW):** This study focuses on enhancing cloud security by integrating blockchain and machine learning, offering improved data protection and intelligent threat detection in a scalable framework.

## TECHNICAL SKILLS

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- Blockchain Development: Solidity, Rust, Polygon, Binance, Solana, Ethereum, Tron, Remix, Ganache
- Frameworks: Node.js, Express.js, MongoDB, Vue.js, React.js, Next.js, Firebase, MySQL, Hardhat, Truffle, Git
- Programming Languages: TypeScript, JavaScript, Python, Java, C++, HTML, CSS

## LANGUAGE SKILLS

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- Tamil, native speaker
- English (Advanced) (IELTS Band 8)
- Hindi (Beginner)
- Spanish (Beginner)

## CERTIFICATIONS

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- Blockchain and Cryptocurrency IIT Madras CCE
- The Complete 2022 Web Development Bootcamp – Udemy
- Artificial Intelligence Analyst – IBMCE
- Complete A.I. & Machine Learning, Data Science Bootcamp
- Postman API Fundamentals Student Expert

## EXTRACURRICULAR ACTIVITIES

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- Art & Craft club secretary during middle school (2018)
- The Bharat Scouts and Guides (2014 – 2017)
- Shotput (2014 – 2017)
- Silambam martial arts (2013 – 2017)

## AWARDS AND HONORS

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- Merit Certificate, Vellore Institute of Technology, Outstanding performance in the academics (2021 – 2022)
- Debate competition, Maharishi Vidya Mandir, First place (2016)
- Maharishi Science Olympiad, 2017 - 2018, 2016 - 2017, 2014 - 2015, First place (three times)
- Division Level Syloth Silambam Competition 2016, Tamil Nadu Syloth Silambam Association - First place, Junior Category (Feb 2016)
- Think & Learn Challenge, The Times of India, participated and qualified for city finals (2015 – 2016)
- National Level Science Talent Search Examination [NSTSE], State rank 392 (Jan 2015)
- Drawing and Painting contest, Indira Gandhi Rashtriya Gyanpeeth, grade First+ (Oct 2014)
- SOF-7th International Mathematics Olympiad [IMO], City rank 20, International rank 6075 (Dec 2013)
- Jet Toy Challenge, AWIM Kancheepuram Olympics, SAEINDIA, 1st Runner-up (Dec 2013)

## VOLUNTEER ACTIVITIES

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- Rashtrapati Training Workshop, The Bharat Scouts and Guides (April 2017)
- ENVIRO, Industrial Waste Management Association, IIT Madras (July 2016)
- Sri Krishna Yogathan, Initiative for Moral and Cultural Training Foundation [IMCTF] (Aug 2016)
- Swami Vivekananda Walkathon, Initiative for Moral and Cultural Training Foundation [IMCTF] (Aug 2016)