

# Dheeraj Nalubolu

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## SKILLS

**Programming Languages:** Solidity, Java, Rust, Python, TypeScript, JavaScript, C++, C

**Web/VCS:** ReactJS, Node.js, HTML, CSS, Git

**Databases:** MySQL, OracleSQL, PL/SQL, MongoDB

**Cloud:** AWS

**Other Technologies and Frameworks:** REST, Docker, Substrate, Hardhat, Ethers.js, JUnit, Express.js, SocketIO

## EXPERIENCE

**Soulmynt** - New York, US[Part-time]

Sep 2023 – Present

### Blockchain Engineer

- Developed custom smart contracts using the factory design pattern to issue soulbound NFTs as on-chain certifications
- Implemented ERC4337 standard support to offset gas fees for application users

**Northeastern University Blockchain Organization** - Boston, US[Part-time]

Nov 2022 – Present

### Director of Technology

- Led a team of 20 members focused on blockchain technology, overseeing three projects in account abstraction, DAOs, and on-chain certification, with a focus on EVM compatibility and full-stack development (Node.js, React.js)
- Facilitated workshops and hands-on sessions to enhance members' practical skills in blockchain technology

### DAPP/Smart-Contract Developer

- Developed and deployed a cross-chain orderbook decentralized exchange utilizing Axelar protocol, ensuring compatibility and functionality across multiple EVM-based blockchain networks

**Zoho Corporation** - Chennai, India

Feb 2020 – Aug 2022

### Senior Software Engineer

- Developed a USDT-based escrow payment gateway in Zoho Expense using merkle proof verification and efficient bitmap tracking, ensuring verifiable reimbursements tailored to each employee's expense policies
- Implemented a real-time USDT-to-fiat conversion feature, ensuring seamless transaction processing and catering to employee preferences for direct bank account reimbursements
- Engineered a blockchain-based timestamping feature for Zoho Sign, integrating Ethereum blockchain to ensure immutable record-keeping and enhanced document integrity
- Integrated third-party applications into Zoho Expense using webhooks, Java servlets and MySQL
- Improved data export process in Zoho Expense application using Python scripts and Zoho Catalyst Cloud Platform
- Developed custom functionalities in Zoho Expense using Deluge scripting language
- Developed Python script to identify most efficient database schema for CRUD operations
- Reduced the response time of Zoho Expense application APIs by 15% by introducing an in-memory caching and eliminating costly DB hits

**Cognizant Technology Solutions** - Chennai, India

Oct 2018 – Jan 2020

### Associate Software Engineer

- Developed an automation tool using Java to enhance accessibility standards in websites based on WCAG guidelines by achieving an 80% reduction in the delivery time of accessibility-compliant web components to clients
- Improved a Java open-source product called Galen framework by adding a text node recognition feature
- Programmed a Google Chrome extension to extract locator data from selected web components, significantly reducing testing times by minimizing manual webpage scanning

## PROJECTS

**CrossChain - Decentralized Exchange** [Github](#)

Jan 2023 – Mar 2023

- Developed a Full Stack CrossChain - DEX to trade ERC20 compatible tokens across any EVM compatible blockchain
- Implemented a central hub for a unified liquidity provision system, which aggregates liquidity from neighboring EVM chains to improve the efficiency of Deposit, Withdrawal, and Trade actions (Market/Limit)
- Developed back end(smart contracts) functionality in Solidity and front end in ReactJS

**BlockXfer** [Github](#)

Jan 2023 – May 2023

- Developed a Full Stack decentralized application for managing crypto payments using phone numbers as identifiers
- Implemented a secure two-way mapping of encrypted Ethereum addresses and user phone numbers stored in IPFS
- Developed smart contracts in Solidity, implemented back-end core logic (including IPFS resolution) in NodeJS, and developed the front end in ReactJS

### Realtime Peer-Peer Video Conferencing Application [Github](#)

May 2020 – Jul 2020

- Implemented a real-time video chat application using NodeJS primarily utilizing Web Sockets and WebRTC
- Enabled file-sharing functionality between participants utilizing WebRTC data channels

### Database Management for Social Networking Application [Github](#)

Sep 2022 – Dec 2022

- Engineered back-end for a robust e-commerce system using Oracle Database
- Implemented Procedures, Packages and Triggers to manage relationships between entities and, at the same time, to improve the data integrity and security of the database

## EDUCATION

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**Northeastern University** - Boston, MA

Sep 2022 – May 2024

Masters Degree, Software Engineering Systems

Coursework: Cryptocurrency and Smart Contract Engineering, Program Structure & Algorithms, Database Systems

GPA: 3.97

## AWARDS

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### Harvard Blockchain Hackathon - EasyA & Gnosis Chain Hackathon

Apr 2023

- Won Axelar's track for the best use of cross-chain bridging and the best use-case
- Developed a decentralized transfer platform that allows one to send or request digital assets using the recipient's phone number

### ETHBoston

Apr 2023

- Runner-up with the project zKredit
- Developed zKredit, a blockchain-based solution for credit score verification. It leverages zero-knowledge proofs to maintain user privacy while verifying credit scores directly on the blockchain, streamlining the lending process.

### Harvard Blockchain Hackathon - Polkadot

Jun 2023

- Runner-up in the Polkadot development track
- Developed CrossChain - DEX, an aggregator of liquidity from all EVM chains, using Moonbeam as a central hub to address fragmented liquidity and high slippage issues

### Harvard Blockchain Hackathon - VeChain

Oct 2023

- Third place in the Sustainability track
- Developed GrowVerse, a decentralized gamification app, innovating in online education by rewarding course completions with tokens to grow virtual plants, aiding real-world tree planting through NGOs