

# Edmundo Arias Ortiz

## Smart Contract Developer & Auditor

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### Professional Summary

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Dedicated to safeguarding against vulnerabilities at every step, embracing challenges where security is a core principle, with a background in software engineering. My work currently is all about building secure and efficient blockchain solutions, and I approach each project with a strong focus on detail and reliability.

### Work Experience

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#### StakedotLink (Chainlink Labs) • NY, U.S

march 2024 - aug 2024

##### Blockchain Developer (Solidity)

Develop of stake.link protocol, the first-of-its-kind delegated liquid staking protocol which enables anyone to provide LINK collateral to and receive a share of rewards from the most reliable and performant Chainlink node operators.

- *Designed and implemented* : Priority Pool for queuing eventual stakes of ERC-20 tokens into the StakingPool based on reSDL governance token priority.
- *Co-architected*: Automated Staking of token deposits, seamlessly integrated with Chainlink automation to allow stake-and-forget user experience.
- *Implemented*: Stake deposits into StakingPool for its distribution across strategies into Operator Vaults or Community Vaults to maximize yield, along with liquid staking token receipts and account shares.
- *Automated*: WithdrawalPool withdraws by avoiding strategy deallocation, instead leveraging queued tokens availability for auto-withdraws via keepers.
- *Participated*: Into rigorous internal audits, invariant testing and formal verification suites to eliminate e2e vulnerabilities.

##### Challenges

- **Security First**: Applied professional-grade smart contract security standards, ensuring robustness against vulnerabilities.
- **Gas Optimization**: Achieved significant cost reductions for strategies distributions as well as to reduce automation transaction execution costs.
- **Automation**: Usage of Chainlink Keepers so as to allocate queued tokens into StakingPool across strategies without external account interaction.

#### 1Cademy (Blockchain Community) Honor Education • MI, U.S

sept 2023 - march 2024

##### Blockchain Developer

Creating educational content that focused on the fundamentals and advanced concepts of blockchain, with a specific emphasis on Ethereum for 1Cademy Blockchain Pathway.

- *Explored*: Consensus mechanism, network protocols, and infrastructure.
- *Presented*: An in-depth exploration of the Ethereum Virtual Machine (EVM).
- *Introduced*: Best practices for testing, auditing, manual code reviews and automated tools.
- *Taught*: Optimizations of EVM assembly language.

#### 1Cademy - Honor Education • MI, U.S

aug 2022 - sept 2023

##### Software Engineer

Designed and architected a knowledge database, to simplify learning complex scientific information by dividing it into micro-content, over an infinite directional graph, where each node represents a discrete unit of knowledge.

- *Knowledge Graph Architecture*: Engineered a scalable and dynamic knowledge graph, organizing a structured progression from foundational 'parent' concepts to advanced 'child' topics.
- *Automated Learning Pathways*: Generation of pathways to optimize learning and teaching.
- *Real-Time Node Interaction*: Developed features for (editing, linking, submitting etc.) with an optimistic UI approach.
- *Leaderboard*: Design a model ranking for community activity stats.

### Challenges & Solutions:

- *High Volume Rendering:* Applied memoization to reduce re-renders, web workers to compute real-time node positions, and also implement custom Rust-based WASM graph-drawer.
- *Real-time Synchronization:* Leveraged Firebase snapshots for seamless updates across shared graphs.
- *Graph Navigation:* Implemented "Scroll to Node" functionality to help users navigate across the graph.
- *Real Time Tutorial:* Inject an interactive tutorial in the graph, which leads users across each graph element while teaching them how to use all graph features.

### Skills

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*Analytical Thinking:* Strong analytical skills with an approach to identifying, tracing and resolving complex issues (transactions, external calls, call delegation etc.).

*Adaptability and Continuous Learning:* Adaptable to protocols and committed to ongoing professional growth, staying current with evolving blockchain standards and innovations.

*Collaboration:* Engaged into team collaboration for concept, vulnerability and problem solving.

*DAPP:* Solidity, Yul, Foundry, Typescript, Hardhat, Certora, Halmos, Slither and Aderyn

*Frontend:* Nextjs, Wagmi, Viem, Wallet Connect, Alchemy RPC.

### Education

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**University of San Antonio Abad • Cuz, P.E**

aug 2014 - april 2020

**School of Information and Systems**

Bachelor of Engineering in Computer and Systems Engineering

### Certifications

- Ethereum.Org Blockchain Developer
- Cyfrin Updraft Security Essentials
- Alchemy University - Blockchain Development