tenderly

Customer Success Story

# How Instadapp Builds Trust and Confidence in DeFi with Tenderly Simulation API

INSTADAPP

**Company:** Instadapp
**Website:** instadapp.io
**Location:** Lewes, Delaware
**Industry:** Decentralized Finance (DeFI)

### Key Challenges

- Excessive time spent on manual debugging
- Lack of unified visibility during QA and testing
- Building user trust and confidence in DeFi trading

### Key Results

- 10x less time spent on debugging
- Improved development speed and integrity of new feature releases
- Higher product adoption and increased interactions on the platform

## The future of DeFi infrastructure

Founded in 2018, Instadapp is a decentralized finance (DeFi) platform that allows users to deposit, withdraw, and trade crypto assets across multiple protocols (Aave, Uniswap, Maker, Compound, etc.). With more than 40,000 users and roughly $2 billion total value locked, Instadapp is 100% trustless and provides developers with infrastructure for building reliable and secure DeFi solutions.

## Building confidence and trust in DeFi

To help users build confidence, Instadapp requires an integrated environment for development, testing, and debugging. The key challenge for Instadapp was finding an all-in-one solution that provides all the necessary tools at each stage of the development cycle in one place.

Operating in the nascent DeFi space, Instadapp's core business mission involves helping users build confidence and trust in DeFi. To achieve these objectives, Instadap needed a comprehensive solution to enable their customers to simulate transactions before sending them on-chain. Instead of building on testnets, Instadapp was looking for an infrastructure solution that would make it easier for users to test-run transactions and strategies against real Mainnet data without spending real money.

Another major challenge for the team was making the debugging process more streamlined and transparent. In the early days, verifying addresses required manual checks through Etherscan. This process was draining and time-consuming, especially when multiple addresses had to be checked manually.

Troubleshooting individual transactions was even more tedious, requiring the team to sift through logs line by line. Without an intuitive UI to keep things organized, the team had to dig through the execution trace and call individual functions to understand where and why the error occurred.

The Instadapp development team also faced challenges with not having reliable testing infrastructure that would allow them to simulate outcomes for different scenarios and solutions. The team was searching for a solution that would enable a more unified approach to QA, testing, and applying fixes and features for users.

To overcome these challenges, Instadapp made a strategic decision to integrate the Tenderly development platform into the core of their product – from development and testing to production.

## Driving growth and agility with Tenderly

The Tenderly development platform empowers Instadapp's engineers at each stage of the development cycle – from testing and debugging to production. Tenderly's tightly integrated Simulator, Forks, and Debugger tools make up the backbone of Instadapp's development process.

> "Tenderly helped us reduce debugging time of complex strategies by 10x. Before Tenderly, it took us ~20 minutes to identify an error in a cross protocol transaction. Now, it takes us only two minutes to find and debug errors."
>
> **Thrilok Kumar,**
> Head of Product at Instadapp

"We use the Tenderly Simulator and Forks in production and internal testing. Whenever an error pops up for a user, we automatically run a simulation on that error and log it in a Slack group. Tenderly helps us reduce errors and understand why they are happening even when the user doesn't complain." – Thrilok Kumar, Head of Product at Instadapp

**Trust, but simulate**

Tenderly Forks and Simulator are embedded into Instadapp's production and internal development workflows. The Tenderly Simulation API enables Instadapp to deliver a frictionless user experience.

In production, whenever a user initiates a transaction simulation, the Instadapp platform calls the Tenderly Simulation API and instructs Tenderly to simulate the transaction on a Mainnet fork. The test transaction is processed on Tenderly's infrastructure, and the results are sent back to the user through the API to Instadapp within seconds.

Tenderly's infrastructure and API have allowed Instadapp to remove the uncertainty and unreliability of testnets from their business model. Offering users the ability to test-run transactions against accurate Mainnet data before spending real money helps Instadapp build trust and confidence with its user base.

"The Simulation API allows us to provide a better UX/UI experience to our users without creating an environment on a particular testnet. Our users can easily test transactions against real Mainnet data, see swap rates, and how their yield looks like before spending any money. Only when the Simulator is turned off is the transaction sent on-chain." – Thrilok Kumar, Head of Product at Instadapp

In internal development, Instadapp uses Simulator to run tests that ensure the integrity and security of smart contracts. When an error pops up in testing, the team runs simulations to find the root cause. Problematic transactions are then loaded into Debugger, where the team can inspect the execution trace, check state changes, and get insights into gas usage with Gas Profiler.

**10x less time spent on debugging**

Partnering with Tenderly, Instadapp instantly saw a reduction in debugging time by 10x, resulting in improved code quality, platform reliability, and development velocity.

Tenderly Debugger has helped Instadapp consolidate debugging operations and ensure a more streamlined and collaborative debugging experience. With Tenderly, the Instadapp team gets an intuitive interface for debugging and analyzing transactions, smart contracts, errors, and much more from the browser.

Built-in collaboration features allow the Instadapp team to flag individual lines of code and leave comments for other team members to investigate issues. As a result, Instadapp is able to deliver not only a better user experience but also improve the overall development experience for its team.

**Support through customized solutions**

With unmatched customer support from Tenderly, Instadapp is able to create value for its users, build trust, and improve agility. Tenderly's engineering support team is always there to help Instadapp overcome roadblocks and serve as a trusted support partner for their development team.

"The Tenderly team is very supportive, responsive, and always open to suggestions. If we have some new feature, we ask the Tenderly team for help, and they often create a customized solution for us." – Thrilok Kumar, Head of Product at Instadapp

## Establishing the trust factor

In tandem with Tenderly, Instadapp is able to strengthen confidence in DeFi trading and bring down the barriers to entry for more skeptical crypto traders. Shriya Tyagi, a Solidity developer at Instadapp, says that she was distrustful of crypto trading until she discovered Instadapp.

"When I was starting out with trading, I was very distrustful of certain platforms. When I started with Instadapp's dashboard, which allowed me to simulate transitions prior to sending them on-chain, this really helped me build trust. We at Instadapp give users a trust factor. The trust factor definitely helps us get more volume and interactions on our platform."

When a transaction simulation is initiated, a Tenderly fork with 100 test ETH is deployed in the background, allowing Instadapp's users to run simulations or test complex investment strategies at zero risk. These infrastructure operations are entirely abstracted away from Instadapp's users, ensuring a smoother user experience.

**Developer empowerment**

From the developer's perspective, Shriya Tyagi says that debugging with Tenderly is not only seamless and intuitive but also "extremely addictive." Shriya notes that Tenderly has helped improve her developer experience by making the development and debugging process easier to understand.

"By the time I joined, Tenderly was already a very big part of Instadapp. Tenderly is extremely addictive. It allows me to see at which point an issue has occurred with a transaction. From there, it's really easy – one click to view in debug mode. Just one click to see the input and output."

In the early days of Instadapp, tasks were simple and easy for a small group of engineers to handle. As the team and workload expanded, Tenderly played a key role in helping developers get more done in less time.

"The team has expanded, and we have done a lot more stuff. A lot of the calls have increased for a particular strategy and function. Practically, Tenderly is our go-to for any sort of error." - Shriya Tyagi, Solidity Developer at Instadapp