



From Black Box to Glass Box: Deep3's Personalized AI Trading Platform

Bringing trust to AI-powered trading and building the future of Web3 personalization

Introduction

Deep3 is a data science company focused on integrating AI and machine learning into the Web3 user experience. Their flagship product, Hōkū, is an AI-powered trading platform that analyzes on-chain data to provide personalized trading insights and recommendations. The platform currently monitors blockchain networks in real-time, offering users customized intelligence based on their trading history and wallet activity.

As Deep3 works toward enabling automated trading capabilities in Hōkū, they faced several technical challenges:

- Ensuring adherence to user-defined risk parameters
- Providing transparency into complex AI decision-making processes
- Building trust in automated systems that control financial assets

Truebit's verification-as-a-service platform addresses these challenges by providing transparent proof of AI operations - transforming Deep3's AI trading platform into a verifiable system and establishing a model for trustworthy AI in decentralized finance applications.

Challenge

Making AI Trustworthy in Financial Decision-Making

Deep3's mission is to make AI and machine learning accessible as core components of the web3 user experience by making it easy for developers to deploy and simple for users to control. As a data science team with decades of combined experience, they've identified a critical missing component in the Web3 ecosystem experience: personalization.

"Personalization is what created Web2 as we know it today—it's what brought your grandma online," explains Daniel Stephens, founder of Deep3. "Web3 hasn't figured this out yet. Every time you connect to an app or do anything on a Web3 platform, you're generally getting the exact same experience as everyone else."

Deep3's flagship application, Hōkū, aims to change this by analyzing each wallet's trading history with advanced AI models and monitoring network activity in real-time to instantly deliver personalized token and dapp recommendations, while their visual 3D network explorer reveals patterns that even the most advanced block explorers can't show.

However, as the platform evolves from making recommendations to automating trades, a fundamental challenge emerges:

How do you build trust when AI is making financial decisions with users' assets?

This challenge is magnified when the AI is not only analyzing data but directly controlling users' wallets:

- **Access Key Risks:** Granting an AI access to private keys or transaction signing introduces new attack vectors and requires bullet-proof key custody solutions.
- **Regulatory and Compliance Complexity:** Ensuring AI-driven transactions comply with KYC/AML rules and evolving crypto regulations demands continuous monitoring and auditability.
- **Explainability of Actions:** Users need clear, human-readable rationales for why the AI bought, sold, or held an asset—especially when real money is on the line.

"When we move into the realm of not only our code managing your money, but an AI that we've built managing your money on top of that, there's so many elements of that stack that need an extra level of transparency and verifiability to gain user confidence," explains Stephens.

Verifiable Guardrails for AI Decision-Making

After evaluating verification solutions, Deep3 chose to integrate Truebit Verify's transparent verified compute platform to build trust in Hōkū's AI-driven trading functionality.

What particularly attracted Deep3 to Truebit Verify was Truebit's approach to decentralized verification:

"The approach of decentralizing the decision consensus process is really attractive for us because we think it ultimately is the right source to scale verifiability. If you wanted to sit down and explain to a layperson how you ensure that this decision the software just made is the right one, the way that Truebit Verify is built on a fundamental level is just easier to understand and explain. That's really attractive when AI is inherently opaque—any opportunity we have to do things that are more transparent, more understandable to people gets a lot of consideration from us."

This integration manifests in several key ways:

1. Verifiable Parameter Enforcement: As Hōkū evolves to become an autonomous trading agent, users will set key guardrails like maximum position sizes and other risk management parameters. Truebit Verify will provide cryptographic proof that the AI respects these parameters. For example, if a user specifies that no position should exceed 20% of their portfolio value, Truebit Verify will create a transparent, verifiable record proving the AI adheres to this constraint without requiring users to manually verify calculations.

2. Creating Trust in Complex AI Decisions: When Hōkū's AI identifies potentially profitable trades (which it does daily), users need confidence that the underlying analysis is sound. By leveraging Truebit's verification layer, Deep3 can provide assurances about the integrity of these recommendations without compromising the sophisticated algorithms that power them.

3. Building for Future Verification Needs: Beyond immediate trading applications, Deep3 is laying groundwork for more comprehensive AI verification:

"Long term, I absolutely think you're going to find a very large market for truly verifiable AI algorithms where the core of the computation process—whether it's inference or training—needs to have that verifiability," notes Stephens. "An AI that's operating inside of a pacemaker isn't science fiction. It's going to happen. But you better believe that people are going to want a higher degree of transparency and verifiability when someone's heart is being controlled by an AI."

Results

From MVP to Mainstream Adoption

While still in beta, Hōkū has already attracted hundreds of users using the platform regularly. As Deep3 looks towards the future, implementing Truebit Verify will be a crucial component needed to unlock autonomous trading capabilities that can learn from and adapt to on-chain activity.

The platform's performance speaks to its potential:

- Hōkū identifies 10x trading opportunities almost every day
- Several 100x+ opportunities are detected weekly
- These results come from analyzing just one network in MVP stage

For Deep3, the value proposition is clear: verification reduces risk and builds trust, which in turn drives adoption. As Hōkū evolves to automate trading decisions, Truebit's verification layer will provide the transparency necessary to scale with confidence.

What's next

The Future of Verifiable AI

The Deep3-Truebit partnership represents an important milestone in bringing AI and machine learning capabilities to web3 in a trustworthy manner. Unlike the "black box" AI systems becoming prevalent across the internet, this approach emphasizes transparency and verifiability. Deep3's vision extends beyond trading, with Hōkū as a starting point for bringing web3-native personalization to the broader ecosystem, whereby individual users retain control and shared ownership of the algorithms that serve them.

"Our primary goal is to level the playing field. We want to give the retail trader extra insights, extra tools, extra advantages that they currently don't have in crypto," explains Stephens. By building on Truebit Verify's transparent computing foundation, Deep3's automated crypto trading platform establishes a new model for how AI can operate in a decentralized environment, where users don't have to blindly trust black-box algorithms with their financial decisions.

Learn more

Truebit's verified computing platform is paving the way for developers to unlock the full potential of Web3 by building certified, interoperable applications that integrate seamlessly with any data source, interact across multiple ledgers, and execute complex code with verifiable results. Built on a foundation of transparent computation, Truebit Verify provides a new level of transparency with provable, off-ledger code execution for the vast majority of application logic that exists outside of smart contracts.

[Learn more about Truebit Verify →](#)

Deep3's mission is to make AI and machine learning accessible as core components of the web3 user experience by making it easy for developers to deploy and simple for users to control. Their team of experienced data scientists is building a future where algorithms are governed by those they affect, with value shared among those who make them possible. Their flagship application, Hōkū, provides personalized trading insights based on real-time analysis of on-chain data. **[Learn more about Deep3 →](#)**