How Bittensor (TAO) is Redefining Decentralized Machine Learning

In this article, we will explore Bittensor (TAO) and its innovative approach to decentralized machine learning. We will highlight the limitations of traditional AI systems and how Bittensor creates a peer-to-peer marketplace that encourages collaboration. We will examine Bittensor's unique model, its Proof of Intelligence system, and the important role of the TAO token in supporting this decentralized AI network. We will conclude the article by providing a guide on how to buy and trade TAO on CoinEx.

Introduction to Bittensor: The Neural Internet

Traditional machine learning systems are largely centralized, with AI development dominated by a handful of large corporations. This concentration of power creates significant barriers to innovation, limiting access to crucial data and computational resources. Independent developers and researchers struggle to contribute or collaborate, resulting in isolated AI models that hinder the sharing of knowledge and slow down progress. Redundant efforts in model development further waste resources and limit the potential of machine learning.

Bittensor was developed to solve these limitations by decentralizing machine learning and creating an open, collaborative network. Unlike traditional AI systems, Bittensor allows developers from around the world to participate in a peer-to-peer marketplace, where AI models are freely shared, trained, and improved. This decentralized structure eliminates the restrictions of central control, making AI development accessible to everyone and fostering a rapid expansion of machine intelligence through collaboration.

Bittensor's unique approach, often referred to as the "**Neural Internet**," transforms machine intelligence into a tradable commodity. Using its native token, TAO, the platform incentivizes the sharing of AI models and rewards valuable contributions. This not only promotes collaboration but also creates an economy where machine learning can thrive as a decentralized, scalable ecosystem.

Bittensor's Unique Decentralized Machine Learning Model

Bittensor decentralizes machine learning by creating a network where participants can collaborate in a peer-to-peer marketplace, free from the control of centralized entities. In this ecosystem, developers, researchers, and data scientists contribute

their AI models, which are trained and evaluated by the community. This model allows for the continuous sharing and improvement of machine learning algorithms, opening up opportunities for innovation that would otherwise be restricted in centralized traditional AI systems.

At the core of Bittensor's network are **nodes**, **miners**, and **validators**. Nodes represent participants who host AI models, while miners provide computational resources and serve predictions using their local machine-learning models. Validators, on the other hand, play a crucial role in ensuring the quality of contributions by assessing the accuracy of the predictions made by miners. Using the **Shapley Value**, a scoring mechanism, the network ranks models based on their contributions to the overall intelligence of the system. This incentivizes participants to consistently innovate, as those with the most valuable models earn rewards in the form of TAO tokens.

Proof of Intelligence: Bittensor's Consensus Mechanism

Proof of Intelligence (PoI) is Bittensor's consensus mechanism, it is designed to reward valuable machine learning contributions rather than computational power. This distinguishes it from traditional Proof of Work (PoW) and Proof of Stake (PoS) models. While PoW relies on solving complex mathematical puzzles and PoS on staking tokens to validate transactions, PoI focuses on the intelligence and accuracy of AI models submitted by participants. This creates a merit-based system where the most innovative and effective models gain prominence, ensuring that the network evolves based on meaningful advancements in machine learning.

In this consensus mechanism, accurate and valuable predictions are rewarded with TAO tokens, incentivizing participants to continuously refine their models. By prioritizing the development of high-performing AI, Proof of Intelligence encourages collaboration and drives the collective intelligence of the Bittensor network forward, aligning rewards with the contributions that genuinely enhance the ecosystem's overall knowledge.

The Role of TAO in the Bittensor Ecosystem

TAO is the native token of the Bittensor ecosystem, it serves multiple purposes that empower the decentralized AI marketplace. It is used for governance, allowing token holders to vote on network upgrades and decisions, ensuring a democratic process for the platform's evolution. TAO holders can also stake TAO tokens to participate in the network's consensus mechanism, which enhances security while providing staking rewards. TAO is also essential for payments, facilitating transactions between those who provide AI models and those who utilize them, creating a seamless flow of knowledge and services.

Beyond its functional uses, TAO holds intrinsic value as it drives the exchange of machine intelligence within the Bittensor network. It represents the contributions made by participants, whether it's developing AI models, validating outputs, or improving the network's capabilities. This decentralized marketplace, powered by TAO, enables a global knowledge economy where AI innovation is openly traded. The value of TAO, therefore, extends beyond a typical utility token, as it embodies the collective intelligence and innovation shared within the ecosystem.

TAO's tokenomics are designed similarly to Bitcoin, with a maximum supply of 21 million coins and a halving cycle that occurs every four years. Each block completed approximately every 12 seconds, generates a reward of 1 TAO, which is distributed among miners, validators, subnet owners, and delegators, leading to a daily emission of 7,200 TAO. Once half of the total TAO supply is issued, new coin creation will reduce by 50%, with the first halving expected in September 2025.

A key feature of TAO's tokenomics is the Recycling process, where tokens spent on miner registration fees are returned to the pool, potentially delaying the halving events. The cost of registration within subnets fluctuates based on miner demand, which could theoretically make TAO deflationary if registration costs exceed daily emissions. TAO was also fair-launched with no pre-mined tokens or ICOs, emphasizing its decentralized nature.

How to Buy and Trade TAO on CoinEx?

CoinEx is a global cryptocurrency exchange, trusted by 10+ millions of users worldwide with 100% reserve. With 1,200+ tokens supported, including TAO, users can now trade easily and seamlessly.

To purchase TAO tokens on CoinEx, follow the steps below.

1. **Create an Account:** Start by signing up for a CoinEx account.
2. **Deposit Funds:** After logging in, deposit funds into your CoinEx account using any supported cryptocurrencies or deposit methods available on the exchange. Having funds in your account enables you to execute trades seamlessly.
3. **Navigate to the TAO Trading Page:** Once your account is funded, go to the dedicated TAO trading page on CoinEx. You can find a search box and enter the ticker "**TAO"** to locate the trading pair associated with EIGEN tokens.
4. **Choose a Trading Pair:** Select the trading pair TAO/USDT if you'd like to trade TAO against USDT (Tether).

5. **Specify the Purchase Amount:** Determine the quantity of TAO tokens you want to purchase. Input the amount in the trading interface, which will calculate the corresponding cost based on the current market price.
6. **Execute the Trade:** With the specified amount, proceed to execute the trade. Confirm the details, and if you are satisfied, submit the order.

By following these comprehensive steps, you can easily trade TAO tokens on CoinEx, taking advantage of the available trading pairs. Explore more in-depth guides and stay updated with the latest cryptocurrency news on CoinEx. Don't miss out on new crypto projects and tokens!