Project name

UBet
ubetsports.io

Team members:

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What project are you building

A decentralized exchange for sports trading. The sports trading includes, sports prediction market, daily fantasy sports, and sports derivatives.

Why did you decide to build it

We want to serve sports fans by providing better access to betting services. An open sports trading system that is decentralized and transparent to users.

Our objective is to enhance the existing classic sports betting business to a modern, cutting-edge, and world-wide scalable model from both business and technology innovation aspects. We view sports betting as another type of financial instrument that can be traded just like other derivatives. We envision sports betting to be fairly traded over the market place and digitized using smart contracts and stored in a public ledger.

A detailed technical description of your project

Building on top of the Gnosis platform
We plan to build our sports prediction market protocols on top of the Gnosis platform. The foundation of our smart contracts for the prediction market and governance token will be powered by Gnosis conditional tokens and Gnosis Safe smart contracts respectively.

Proposing a new AMM algorithm for prediction markets
Besides the basis of our smart contracts, our technical innovation consists of our own automated market making (AMM) algorithm for both price discovery and service fees.

Existing prediction markets like Polymarket and Omen use constant product AMM. This particular AMM is originally introduced for the general use case of swapping tokens. Unfortunately, it does not suit the prediction market with discrete outcomes, that result in one token price going to zero. For instance, we notice that there are floating point errors as the market event matures. This is because the market outcome results in binary value but the probability of an event approaches but cannot ever reach 0 or 1. The constant product curve is an open set while ideally the pricing curve needs to be closed for prediction markets. Our AMM addresses this issue by having a pricing curve where its domain contains the closure.

Volatility Countering Mechanism for LPs
Another issue with existing prediction markets is that very often liquidity providers end up with huge losses. One of the reasons why the impermanent loss occurs is due to predictors that enter near the end to make profit or leave near the end to minimize the loss. These behaviours lead to loss for liquidity providers unless liquidity providers also exit at the right timing. We propose an AMM for service fees that is applied once the sports game starts. This is because the dynamics of the market abruptly changes as new information continuously comes out during the game. Our AMM adjusts the service fee such that the expected profit from

impermanent loss and gain is closer to zero during the game. This will require another oracle to signal the start of a game - this is unique to sports events, and not easy to replicate in general. This feature allows us to protect liquidity providers, and keep the platform more sustainable.

Reward and voting mechanisms
To encourage participation, and increase trust in the system, our native token will be given out as a reward for users of the platform. This token can be used for governance purposes, such as voting on a council, voting on events and inclusion of betting pools. The token can also be used to vote on and reward oracle providers for events.

Common liquidity pool
In order to further spread out risk for liquidity providers, we propose a common liquidity pool that is shared among all AMMs. This should allow more liquidity providers to join the service who may not follow sports directly but want to earn passive income - if the number of events is large enough, overall risk should be reduced for the common pool. Distribution of liquidity from the common pool can be driven by metrics such as volume and volatility. Fees distributed to the common pool will be lower than those in specific pools, to encourage those with the know-how to participate in individual pools directly.

How long will it take

We are targeting the start of 2022 for an alpha release, with an MVP following shortly thereafter.

- Jan 2022 - Alpha - Basic frontend. Token on Eth, Polygon testnets. AMM contracts on Polygon testnet.
- May 2022 - MVP - One sport and regular events. Better Frontend with historical information. Token on Eth, Polygon mainnets. AMM contract on Polygon mainnet.
- Q3 2022 - More events/sports. Token reward mechanisms
- Q4 2022 - Common liquidity pool

How did you hear about the GECO

Found on gnosis website while reading documentation on Gnosis conditional tokens.

How much funding are you requesting

$100,000USD equivalent in USDC or DAI. The funding will be used for:

- Research on better AMM curves and fee structures specifically for prediction markets. To be published in a journal or medium article.
- Research on common liquidity pools, and allocation strategies. To be published in a journal or medium article.
- Contract development
- Contract audits

A brief description of your team

Daniel J Im
Daniel is a founder of Ubet. Previously, Daniel was CEO of AIFounded Inc (search engine company for machine learning models) and a CTO of Coinscious Inc (crypto market data mining firm).

Previously, Daniel was a research scientist at Janelia Neuroscience Research Centre, Branson Lab under the advisory of Kristin Branson. Also, I was a researcher at the University of Montreal, MILA machine learning institute under the advisory of Yoshua Bengio and Roland Memisevic. I received my Masters degree from the University of Guelph's School of Engineering department under the advisory of Graham W. Taylor. I received my undergraduate degree from the University of Toronto in 2012. I completed a specialist program in Computer Science with a specialization

in Artificial Intelligence Specialist and pursued Mathematics and Its Application specialist program.

Website: https://jiwoongim.github.io/
Github: https://github.com/jiwoongim

Alexander Kondratskiy
Alex is a veteran software engineer in the high frequency trading and finance industry. Alex was a lead engineer at WorldQuant who led a successful team implementing a next-generation distributed execution system at the multibillion dollar hedge fund. Also, Alex maintained core technologies for the high frequency trading firm KCG (ex-Getco). Alex has extensive experience in software design and engineering having previously worked at Sigma and Qualcomm on embedded software. Alex studied computer science, artificial intelligence and mathematics at University of Toronto.

Website: http://kholdstare.github.io/
Github: https://github.com/KholdStare?tab=repositories

Where you've applied for other sources of funding if applicable

No. This is our first time applying for grants. We started seeking seed investment as well.