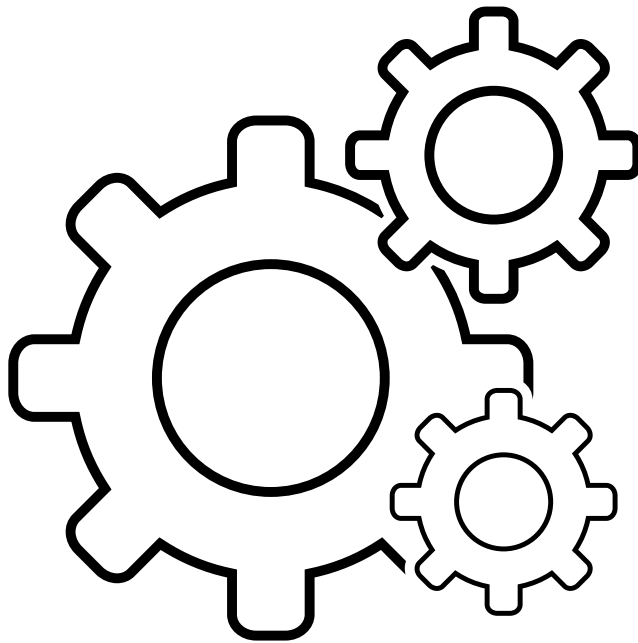


Technical Overview of Huddle's Micro Markets

Challenges of Pricing and Offering the Micro Markets and Huddle's
Unique Approach



INTRODUCTION

The **HuddleOS Odds Feed** comprises a consolidated markets feed encompassing various categories:

- 1. Cores and Derivatives:** Standard markets such as moneylines, spreads, and totals, along with their derivatives.
- 2. Micro Markets (Micros):** Markets characterized by a brief betting period, typically associated with a single play in the game.
- 3. Player Props:** Markets linked to player statistics during the course of the game.

While this paper predominantly concentrates on Micro Markets, it is important to note that the approach to market making remains strikingly similar across all market categories.

What Are Micro Markets?

In sports betting, Micro Markets refer to very specific and granular betting options within a particular sporting event. Unlike traditional betting markets that focus on outcomes such as the winner of a game or the total points scored, Micro Markets break down the game into smaller, more detailed events or occurrences. This allows bettors to place wagers on highly specific and often short-term events during a game.

Micro Markets provide a more diversified and dynamic betting experience, allowing bettors to focus on specific aspects of a game rather than the overall outcome. This type of betting is particularly popular in live or in-play betting scenarios, where odds are constantly updated based on the unfolding events in the game and its dynamic nature makes them well-suited for bettors who enjoy a fast-paced and interactive experience.

CHALLENGES OF PRICING AND OFFERING MICROMARKETS

Offering Micro Markets in sports betting poses several challenges for operators due to the specific and often intricate nature of these betting options. Some of the difficulties in pricing and offering Micro Markets include:

Limited Historical Data: Micro Markets may involve very specific events or player performances that occur infrequently. This lack of historical data makes it challenging to accurately assess the probabilities and set odds. Predicting outcomes with a limited track record may result in increased pricing uncertainty.

Dynamic Nature of Events: Micro Markets unfold in real-time, due to their relevance to in-play betting. The dynamic and unpredictable nature of events during a game makes it difficult for operators and providers to adjust odds quickly and accurately. Unexpected changes in circumstances, such as injuries or unexpected player substitutions, can significantly impact the pricing of Micro Markets.

Complexity of Outcomes: The more specific and granular the market, the greater the complexity of potential outcomes. To accurately assess the probabilities of different events within the Micro Market, various factors must be considered, such as player form, team strategies, and situational variables.

Risk Management: Micro Markets can be riskier for operators due to the potential for sharp bettors to exploit perceived inefficiencies in the odds. Operators must carefully manage their risk exposure and adjust odds in response to betting patterns to minimize potential losses.

Technology and Speed: In live betting, where Micro Markets are often prominent, the speed of technology becomes crucial. Providers need robust and agile systems to update odds in real-time, respond to market shifts, and maintain a competitive edge.

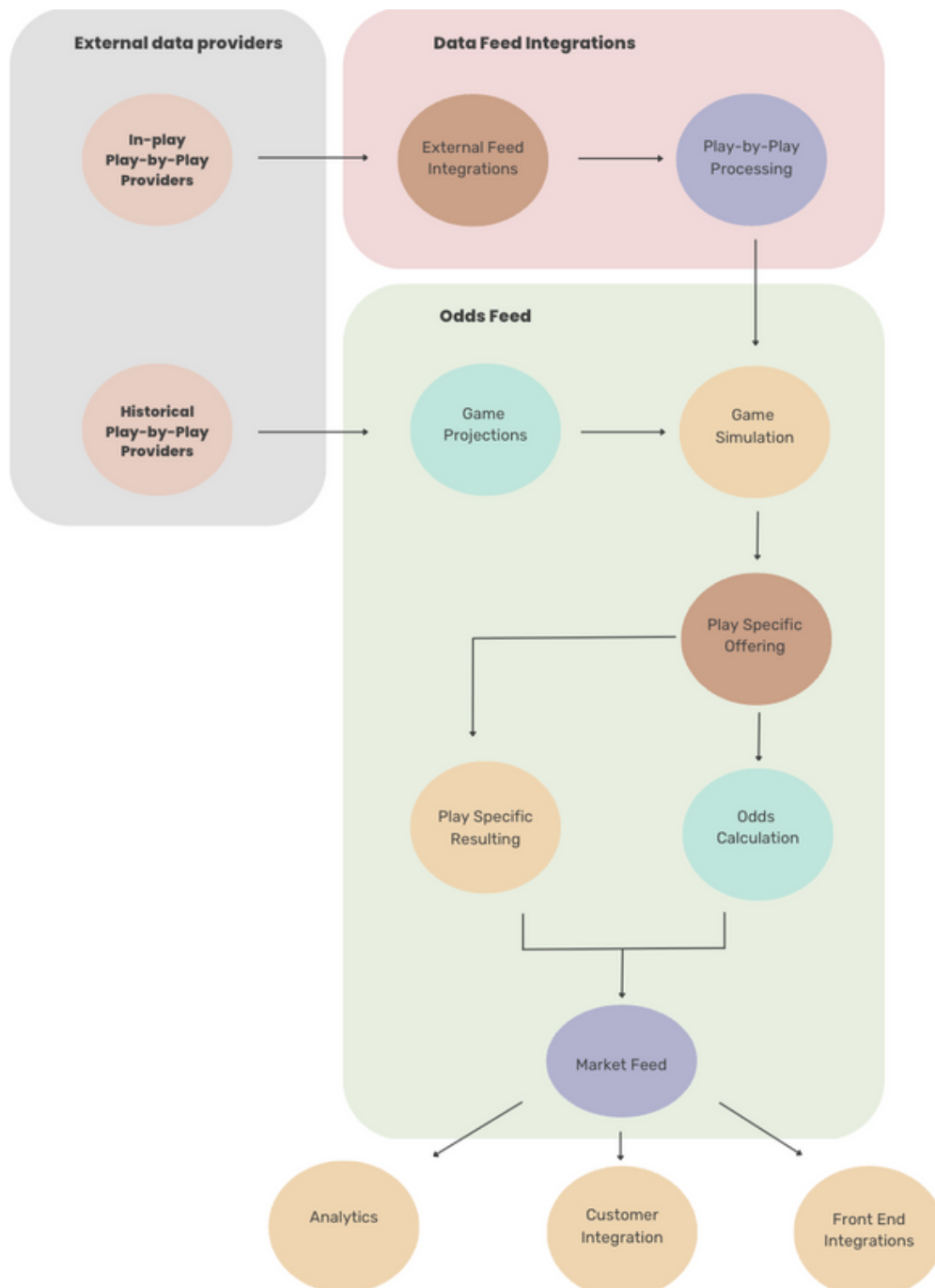
To overcome these challenges, providers must require a combination of advanced statistical models, real-time data feeds, and expert knowledge of the sport. Providers must continually refine their pricing strategies and risk management practices to navigate the complexities associated with Micro Markets in the dynamic and competitive sports betting industry.

HUDDLE'S UNIQUE APPROACH

Latency

Huddle has invested a significant amount of time and resources to ensure the platform can price all the markets offered with the minimum possible latency. As mentioned earlier, this is especially crucial for Micro Markets due to their notably short availability time. The modern platform, leveraging reliable and robust technological solutions, ensures that data is processed swiftly, enabling clients to receive timely updates. This, in turn, greatly enhances the user experience that HuddleOS can provide.

In order to accomplish the precise Micro Markets offering, the Huddle team needed to develop a low-latency play-by-play data processing solution. This unlocks a real-time play-specific offering of the markets and near-real-time play-specific settlement, both crucial for the user experience.



Models

At the core of Huddle's product lies a suite of Monte Carlo based models meticulously developed for each sport under analysis, underscoring Huddle's dedication to precision and adaptability in sports forecasting. Monte Carlo simulations were selected for their inherent strengths, which encompass robustness in handling intricate, variable-rich environments and the capacity to furnish detailed probabilistic forecasts. These models distinguish themselves by excelling in simulating a broad spectrum of outcomes, incorporating randomness to facilitate a thorough assessment of potential scenarios and their respective probabilities

Huddle's proprietary Monte Carlo models, crafted over time using sophisticated statistical techniques, skillfully take into account all the variables influencing the pricing of Micro Markets. In particular, real-time official data is leveraged to incorporate information such as players on court, injuries, disciplinary actions, and all the contingencies known to play a role, although sometimes minimal, in the underlying probability of the outcomes. With this unique pricing approach, Huddle ensures maximum accuracy in Micro Markets prices as well.

Integration and Parity With the Main Offer

In all contexts where the Micro Markets' offering hasn't been anticipated from the get-go, it's often noticed how this group of markets seems somewhat detached from the main offer. Huddle's approach always considered seamlessly integrating Micro Markets (or any other kinds of markets) into a single **unified odds feed product**.

In addition to the Core, Derivatives, and Player Props markets, Micros play a vital role in Huddle's **Same Game Parlay (SGP) product**. Frequently, including Micro Market selections in SGP isn't possible, and controlling resulting outcomes or suspension logic can't be done with fine granularity. The Monte Carlo methodology employed by HuddleOS **enables the models to simulate highly granular events**. This simulation is essential for comprehending the correlation between the outcomes of all the markets provided by HuddleOS, including Micros.

Conclusion

In summary, **HuddleOS' Micro Markets** feature offers a dynamic and granular approach to sports betting, enhancing user engagement in fast-paced scenarios. Despite challenges like limited historical data and dynamic event nature, HuddleOS employs a unique approach, featuring low-latency processing, advanced models, and seamless integration for accurate and engaging Micro Markets. The dedication to precision and real-time data ensures users experience maximum accuracy and efficiency in pricing.

Looking ahead, Huddle envisions a series of strategic advancements to further solidify the Micro Markets feature within HuddleOS, reflecting Huddle's commitment to innovation and user satisfaction.

- 1. Expanded Sports Support:** One of Huddle's primary objectives is to broaden the scope of Micro Markets by adding support for a wider array of sports. By extending the Micro Markets feature to encompass various sports, Huddle aims to offer users a more comprehensive and diverse betting experience tailored to their specific sporting preferences.
- 2. Diversification of Micro Markets:** Huddle plans to introduce new types of Micro Markets, enhancing the granularity and variety of betting options available to users. This diversification will allow bettors to engage with a broader range of specific in-game events, further personalizing their betting experience.
- 3. Player-Specific Micros:** A pivotal future step involves the introduction of player-specific Micro Markets, where users can place bets on highly granular events directly tied to individual players. This innovative addition will deepen the level of engagement and personalization, allowing users to focus on specific player performances within the context of a game.

These future steps underscore Huddle's commitment to continual improvement and responsiveness to user preferences. As we expand support for different sports, introduce new types of Micro Markets, and explore innovative combinations, HuddleOS remains dedicated to providing a dynamic, engaging, and personalized sports betting platform that sets new standards in the industry.