PLONN Investments

White Paper

July 10, 2025

—
Jake Giguere
PLONN Investments
discord.gg/UJRrNcscUE

Contents

1 Key Terms and Acronyms

Acronyms

PLONN Probabilistic Line Optimization Neural Networks
ROI Return on Investment
MLB Major League Baseball
NBA National Basketball Association
LLM Large Language Model
MLP Multi-Layer Perceptron
RNN Recurrent Neural Network
CNN Convolution Neural Network
LSTM Long Short Term Memory
ETF Exchange-Traded Fund
AUM Assets Under Management
AI Artificial Intelligence
NLP Natural Language Processing
CPU Certified Public Accountant

Key Terms

PLONN Proprietary machine learning system used to generate high-accuracy predictions in sports and equity markets. It forms the core of all investment decision-making for the firm.

Unit A standardized stake representing 1× the starting bankroll (or a chosen percentage thereof). All cumulative-return charts normalize the initial capital to 1 unit, allowing for performance comparisons that are independent of currency.

Kelly Criterion A formula used to calculate the optimal bet size to maximize logarithmic (geometric) portfolio growth. Widely adopted in both gambling and quantitative finance.

¼ Kelly / ½ Kelly / Full Kelly Position sizing strategies derived from the Kelly Criterion:
- **¼ Kelly**: Conservative allocation (typically 5–10% of bankroll per bet).
- **½ Kelly**: Moderate risk allocation (10–20% of bankroll).
- **Full Kelly**: Aggressive growth strategy (20–40% allocation), optimized for long-term compounding.

Top-Total_Run Strategy A variant of the MLB model where top total-run predictions are systematically negated (i.e., betting the inverse of over/under) based on model confidence and historical bias.

Twin-Vector MLP A neural network architecture used in the NBA model, where two input vectors are constructed for each team. The first vector encodes team-level statistics such as pace, offensive rating, and defensive rating. The second vector captures the opponent's corresponding team statistics. Historical game data from previous seasons is used to train the model on all possible matchups. By learning patterns in how these statistical profiles interact, the model identifies score correlations between teams. The two vectors are merged and passed through a multi-layer perceptron (MLP) to predict the total points scored in a game.

Return on Investment (ROI) A measure of profitability expressed as a percentage:

$$\text{ROI} = \left(\frac{\text{Net Profit}}{\text{Initial Investment}} \right) \times 100$$

Assets Under Management (AUM) The total value of client capital actively managed by the firm.

LLM-Powered Equity Model A strategy that applies large language models to parse financial documents (e.g., earnings calls, news) for sentiment, trend shifts, and trading signals.

Drawdown The peak-to-trough decline in an account or portfolio, often used as a measure of downside risk.

14-Leg Parlay A bet requiring 14 correct outcomes in a single ticket. PLONN's January 2025 NBA parlay turned $25 into $765,000 using this method.

Subscription Model PLONN's flat-fee service model is priced at $39.99/month, granting access to betting recommendations, model output, and financial signal reports.

ETF & Sector Rotation Tactical investment strategy that reallocates exposure across ETFs or sectors based on macro indicators, market cycles, or volatility.

Profit Reinvestment A core capital cycling method allowing profits from sports engines to reenter the models or flow into the equity portfolio—and vice versa—to maximize capital efficiency.

2 Executive Summary

PLONN is a first-of-its-kind, integrated investment firm that fuses machine learning, sports analytics, and equity research into a unified high-performance capital strategy. Unlike traditional funds or sports betting models, PLONN operates at the intersection of data science and algorithmic investing—delivering consistently high Return on Investment (ROI) through two complementary engines: a sophisticated sports investment system and a diversified equity/dividend portfolio.

At the core of PLONN's novelty is its fully automated, seasonally adaptive approach. By cycling between the NBA and MLB seasons, PLONN captures high-value opportunities 365 days a year. This ensures uninterrupted model deployment, continuous capital growth, and minimal exposure to off-season stagnation.

Leveraging proprietary neural networks, advanced feature engineering, and disciplined Kelly-based risk sizing, PLONN generated exceptional results in 2025. In June, the Major League Baseball (MLB) model achieved a +320% ROI using a negated top-total-run prediction strategy. In July, the model maintained a 75%+ win rate using a rolling-window encoded neural net. Meanwhile, during the 2025 NBA season, a twin-vector multi-layer perceptron (MLP) transformed a $2,330 investment ($10/day) into $773,000—representing a 32,943% return—highlighted by a $25 wager that hit a 14-leg parlay on January 25th.

This continuous, data-driven rotation between NBA and MLB allows PLONN to optimize for statistical edge, liquidity, and timing—setting a new standard in hybrid algorithmic investing.

Benchmark Research in Sports Analytics

PLONN's proprietary models—such as the twin-vector MLP for NBA total score prediction and the flipped top-total-run engine for MLB—build directly on the foundational research in sports analytics while significantly expanding their scope and application. Whereas academic models are typically evaluated offline or in controlled environments, PLONN operates live in real-world betting markets—producing ROI and win rates that consistently surpass academic benchmarks. By integrating deep learning architectures with market-line awareness and dynamic bankroll management, PLONN closes the gap between theoretical models and profitable execution.

- **Predicting NBA Shots (Stanford CS229, 2017)**: This foundational project explored multiple classification algorithms—including logistic regression, SVM, Naive Bayes, random forests, and gradient boosting—to predict the success of NBA field goal attempts. The best-performing model, XGBoost, achieved **68% accuracy** [3], with shot distance and defender proximity emerging as top predictors.

— **Applying Deep Learning to Basketball Trajectories (arXiv, 2016)**: Shah and Romijnders applied RNNs to SportVU tracking data, modeling three-point shot outcomes using sequential player movement. Their study demonstrated that **RNNs significantly outperformed feature-based models**, particularly on complex temporal datasets [6].
— **Scoring with Few Shots (Stanford CS231n, 2024)**: This project used computer vision and few-shot learning to classify basketball shooting form from video data. Among CNNs, LSTMs, and boosted trees, XGBoost delivered the best performance with **82.4% accuracy** and strong interpretability via SHAP [5]. However, deeper models like CNN+LSTM suffered from overfitting due to limited labeled data.
— **Bidirectional LSTM with Mixture Density Networks (Zhao et al., 2017)**: This work focused on predicting and generating player shot trajectories using a bidirectional LSTM paired with a Mixture Density Network (MDN). The architecture **produced more accurate predictions and realistic shot paths** than traditional RNNs [**?**].
— **Predicting Shot Outcomes from Multiagent Trajectories (Harmon et al., 2016)**: Harmon et al. encoded multi-agent movement as image data, feeding it into convolutional and feedforward neural networks. Their model achieved around **61% accuracy** on shot outcome prediction [**?**].

3 Market Opportunity

— **Equities & Income**: Global equity markets exceeded $114 trillion in 2023 and are projected to surpass $126 trillion by 2025, offering investors consistent dividend yields of 2–5% and long-term annualized growth of approximately 6–8% [7]. However, as passive indexing and institutional participation grow, alpha generation in traditional equity markets becomes increasingly difficult—creating demand for hybrid, machine-learning-driven strategies like PLONN.

— **Sports Betting**: The legal global sports betting market was estimated at over $100 billion in 2024 and is expected to grow to $187 billion by 2030 at a compound annual growth rate (CAGR) of over 11% [1, 2]. Major leagues such as the NFL, NBA, and MLB present persistent pricing inefficiencies in markets like over/unders and props, making them ideal for exploitation by quantitative models [10].

— **Institutional Access**: Systematic analytics and quantitative betting strategies have historically been the domain of hedge funds and proprietary trading firms. PLONN democratizes access to these tools—offering accredited investors professional-grade signals, real-time model outputs, and AI-augmented capital deployment through subscription and AUM-based offerings.

4 Strategy Overview

4.1 Sport Engines

— **MLB Model**: Ensemble of gradient-boosted trees and neural networks, betting line moves, and applied statistics layers; Kelly-based sizing delivers +320% ROI in June
— **NBA Model**: A twin-vector multi-layer perceptron (MLP) predicts total points scored by both teams. One input vector encodes team-level features (pace, efficiency, home/away, injuries); the second encodes game-specific signals (recent form, back-to-back status, travel distance). The MLP merges these and outputs a probability distribution over total points.
— **Profit Reinvestment**: Monthly sports profits can compound in the sport ensembles or flow back to equity capital, optimizing cross-asset growth. Equity and dividends can be reallocated to the sports engines.

4.1.1 Monte Carlo Simulations

PLONN extends beyond historical analysis by leveraging Monte Carlo simulations to forecast future portfolio growth and win probability across varying strategies and time horizons.

Each simulation is built on a rolling window of historical prediction accuracy, betting frequency, line edge, and ROI distributions. These inputs are sampled probabilistically—rather than deterministically—to reflect market volatility and realistic variance.

— **Monthly Outlooks**: Thousands to millions of dynamically simulated outcome paths are generated to estimate expected monthly ROI, win rate, and max drawdown across different Kelly strategies.
— **Strategy Stress Testing**: Monte Carlo outputs help assess how PLONN's models would perform under streaks (e.g., 5 straight losses), line drift, or reduced edge—providing resilience testing before real capital is deployed.
— **Risk-to-Reward Optimization**: These simulations guide bankroll sizing decisions by comparing cumulative performance profiles across ¼, ½, and Full Kelly modes.

Because the simulations incorporate both model confidence and line efficiency, PLONN can play out millions of realistic performance paths in investors probabilistic expectations rather than static backtests.

This forward-looking capability turns PLONN into not just a reactive betting engine, but a proactive forecasting system—capable of estimating, adjusting, and executing on dynamic opportunity windows in MLB and NBA markets alike.

4.1.2 Data Collection

To support PLONN's predictive engines, historical and real-time sports data is collected across both basketball and baseball domains. The primary sources for historical statistics are:

- **Basketball-Reference.com**: Game-level and player-level data including team stats, offensive/defensive ratings, pace, win-loss records, and advanced metrics for every NBA matchup.
- **Baseball-Reference.com**: Historical MLB data encompassing team runs, player pitching logs, batting splits, and situational outcomes.

These sources are accessed via automated web scrapers written in Python using 'requests', 'BeautifulSoup', and 'pandas'. The scraping infrastructure is hosted locally and updated daily, ensuring all model inputs remain current. The sites offer paid, ad-free access that enhances performance and reliability, with a total cost of approximately **$8.99/month**.

4.1.3 Automated Pipelines

Once collected, data is automatically cleaned, transformed, and streamed into Google Sheets for applied statistics, betting simulations, and model validation. This low-latency integration enables near real-time tracking of predictions, sportsbook line discrepancies, and bankroll performance—allowing PLONN to continuously monitor edges and outcomes throughout the day.

Two primary automation workflows support this system:

- **Live Line Integration**: A custom-built Python API connects to `odds-api.com` [4], fetching current over/under lines, alternate totals, and props across multiple sportsbooks. Historical line movement is also pulled to allow backtesting of market efficiency against PLONN's predictions. This live feed is essential for flagging mispriced markets and tracking closing line value (CLV).
- **Google Sheets Pipeline**: All historical and predicted data—scraped from `basketball-reference.com` and `baseball-reference.com` [9, 8]—is formatted and pushed to structured Sheets using the Google Sheets API. From there, applied statistics (e.g., win rate by DK diff bin, over/under hit rates, volatility clusters) are computed via formulas, pivot tables, and conditional formatting.

  Sheets serve as the central operational interface for analysis, bet selection, bankroll logging, and daily decision-making. The entire pipeline runs autonomously on a daily schedule, minimizing manual intervention while maximizing transparency and reproducibility.

The odds API service costs approximately **$30.00/month**, and Google Sheets offers seamless, low-overhead cloud-based visualization and access for real-time collaboration and tracking.

4.2 Equity & Dividend Portfolio

- **LLM-Powered Equity Models**: NLP on news, earnings transcripts, and social signals identifies 3–12-month trends.
- **Dividend-Growth Selection**: Screens for companies with 5+ years of dividend increases, stable cash flows, and low payout ratios.
- **ETF & Sector Rotation**: Tactical shifts based on macroeconomic indicators and volatility targeting.
- **Risk Controls**: Dynamic rebalancing, draw down limits (max 8%), and sector diversification maintain portfolio stability.

5 Performance Track Record

MLB - June 2025

— Strategy: Flipped `top-Total_Run` model predictions
— Record: 21 wins / 28 bets
— Return: +320% ROI (Full Kelly)
— Bankroll: $2,000 → $7,500 (Peak: $9,900)

MLB - July 2025 (In Progress)

— Early Performance: 6/8 correct (75% win rate)
— Projected Growth: ≥ 300% (¼ Kelly strategy)

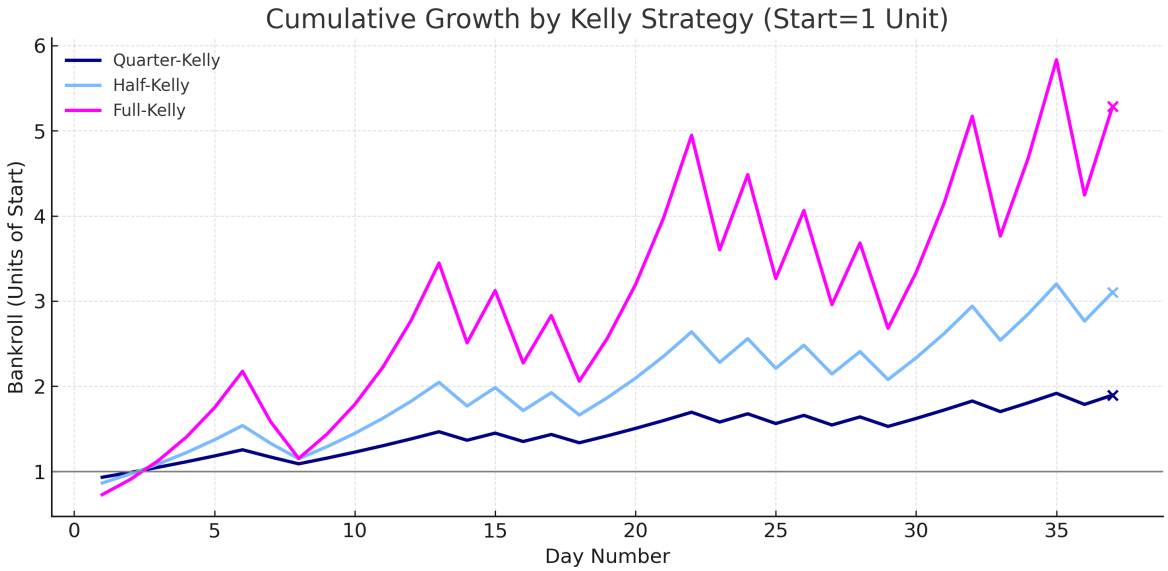

Figure 5.1 – Cumulative ROI in *units* with Kelly Sizing (2025 Season)

NBA - 2025 Season

— Total Winnings: ≈ $773,000

— Highlight: On January 25th, turned $25 → $765,000 via correctly predicted 14-leg parlay

6 Risk Management

PLONN employs the Kelly criterion to optimize geometric growth while controlling downside exposure. By sizing positions in proportion to expected edge and variance, Kelly-based bankroll strategies enable consistent, compounding returns while mitigating the risk of ruin.

The table below outlines PLONN's tiered bankroll allocation framework, allowing clients to choose from conservative, moderate, or aggressive growth profiles:

Risk Level	Strategy	Daily Allocation	Max Drawdown Target
Low-Risk	¼ Kelly (∼10%)	5–10%	≤5%
Moderate-Risk	½ Kelly (∼20%)	10–20%	≤10%
Growth-Aggro	Full Kelly	20–40%	≤20%

Table 6.1 – Risk-Based Bankroll Allocation Strategies

Figure 5.1 illustrates 36 days of simulated performance using each of these strategies.

- The **Low-Risk** profile, applying ¼ Kelly sizing, produced nearly **+2 units** with minimal volatility.
- The **Moderate-Risk** strategy, at ½ Kelly, returned close to **+3 units**, balancing growth and drawdown effectively.
- The **Growth-Aggro** Full Kelly strategy, while more volatile, yielded over **+5 units**—demonstrating the power of aggressive compounding when edge is sustained.

This simulation reinforces PLONN's thesis: when edge is real and consistent, Kelly-based scaling compounds capital rapidly. Clients can adjust allocation intensity depending on their tolerance for volatility and capital objectives.

6.1 Portfolio Split

Kelly-Based Sizing: Tiered allocations (¼, ½, full Kelly) enable clients to select low, moderate, or aggressive growth profiles, applying uniform risk controls across leagues.

7 Profit Allocation

7.1 Subscription

— **Subscription**: $39.99/month for daily bets and buy/sell signals across models. This fee underwrites:
  — Licensing and real-time usage of odds APIs (MLB, NBA, etc.).
  — Data ingestion, cleansing, and storage infrastructure.
  — Continuous model retraining and feature-engineering updates driven by fresh feeds.

7.1.1 Assests under Management

AUM Fees: 1% management + 30% performance on net profits.
  — 94% to data science and engineering teams.
  — 6% to CPA/Accounting, scaling to 10–15% based on thresholds.

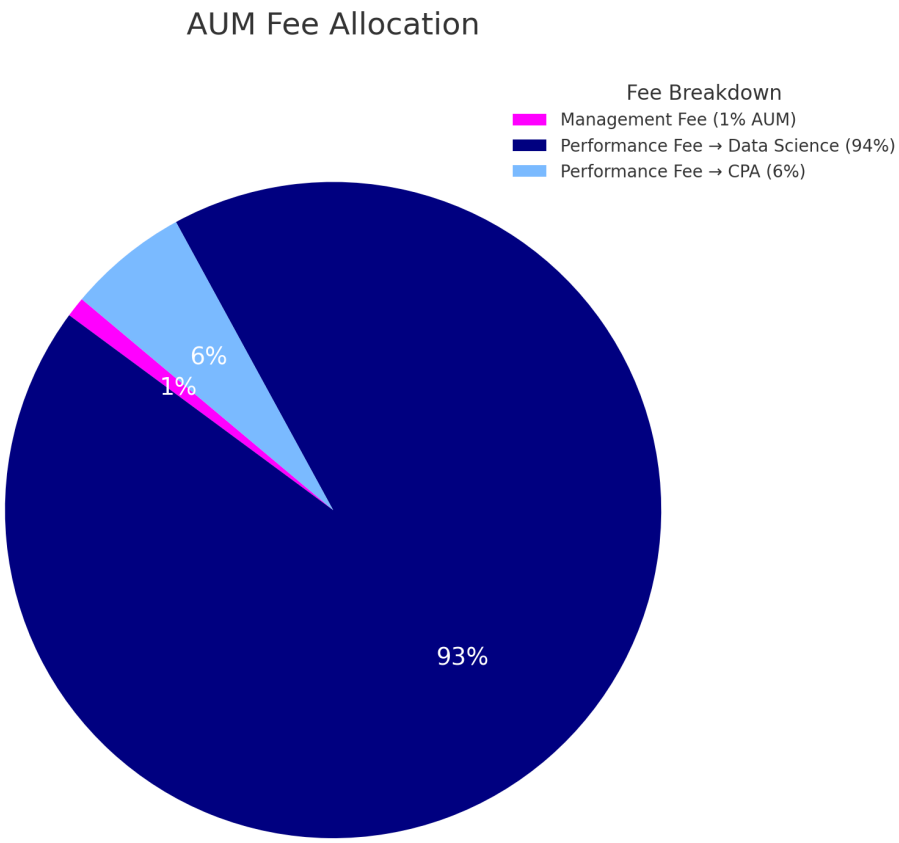

Figure 7.1 – AUM Fee Allocation (% of performance fee)

8 Governance & Reporting

8.1 Discord

All client-facing communication and real-time model updates are hosted on PLONN's private Discord server. This serves as the central hub for:

— Daily delivery of model predictions (NBA totals, MLB over/unders, strikeout props).
— Real-time notifications on betting edges, strategy updates, and market conditions.
— Community Q&A, performance tracking, and investor transparency.

Access to the Discord is granted via the PLONN subscription tier and is included in the $39.99/month membership. Clients receive instant alerts when model thresholds are met, bets are placed, or sportsbook lines shift significantly.

Discord ensures PLONN maintains high-frequency, two-way engagement with clients—delivering institutional-grade insights in a modern, collaborative format.

9 Roadmap

— Q3 2026: Launch interactive investor dashboard; integrate dynamic portfolio allocation tools.
— Q4 2026: Introduce NFL and international soccer models; deploy dividend reinvestment automation.
— Q1 2027: Enhance LLM-driven equity signals with alternative data (satellite, credit-card spending) and expand sports analytics into college leagues.

10 Legal Compliance and Regulatory Framework

Overview

PLONN does not operate as a sportsbook, take wagers, or manage betting pools. All recommendations are model-generated predictions shared for educational and informational purposes only. This section outlines the legal framework under which PLONN's Discord-based tip sharing remains compliant across key U.S. jurisdictions.

10.1 Florida

Florida prohibits most forms of online betting unless explicitly authorized. The applicable statutes include:

- **Florida Statutes Chapter 849** – Criminalizes gambling unless exempted. This includes wagers made online or via unlicensed platforms.
- In 2021, the **Seminole Compact** legalized sports betting through a single operator: Hard Rock Bet. All other platforms or peer-to-peer systems remain illegal.

PLONN remains compliant in Florida by avoiding any wager facilitation or financial participation in betting outcomes. Sharing statistical model outputs (e.g., "Red Sox Under 8.5") does not constitute gambling under Florida law.

10.2 Massachusetts

Massachusetts legalized sports betting in 2022 under:

- **Sports Wagering Act (Chapter 23N)** – Requires licensure for any operator or betting facilitator.
- The **Massachusetts Gaming Commission** oversees platform approval, advertising, and integrity monitoring.

PLONN is not a licensed betting operator and does not place or pool bets on behalf of users. Model output is treated as informational content, not an inducement to gamble.

10.3 New York

New York permits licensed sports betting through commercial casinos and mobile partners. Key laws include:

- **S1550 / A1118 (2022)** – Legalizes mobile betting, but only through approved platforms regulated by the New York State Gaming Commission (NYSGC).
- All betting communications must include problem gambling disclaimers and cannot imply risk-free outcomes.

PLONN's subscription model delivers AI-driven insights without processing wagers or guaranteeing results. Content is educational and not subject to NYSGC licensing requirements.

10.4 Platform Policy

- **Discord Terms of Service** prohibit unlicensed gambling or facilitation of real-money betting. PLONN complies by:
  - Not handling any wagers
  - Not creating prize pools
  - Clearly stating all predictions are for entertainment and educational purposes

10.5 Disclaimer

PLONN is not a financial advisor, gambling operator, or investment fund. All predictions shared in Discord or other platforms are for entertainment purposes only. No betting is processed or accepted by PLONN, and users are solely responsible for complying with local and federal laws.

11 Conclusion

By combining a robust equity/dividend framework with high-conviction MLB and NBA models under strict risk management, PLONN offers a diversified, repeatable path to success. Our transparent fee model, professional governance, and proven track record invite accredited investors to partner in this innovative, data-driven investment approach.

Bibliography

[1] Yahoo Finance. Sports betting industry report 2025–2030: Growth forecasts and opportunities. https://finance.yahoo.com/news/sports-betting-industry-report-2025-150300598.html, 2024. Accessed July 2025.

[2] London Stock Exchange Group (LSEG). Global market size in charts 2024. https://www.lseg.com/content/dam/data-analytics/en_us/documents/charts/lseg-size-of-global-market-2024-in-charts.pdf, 2024. Accessed July 2025.

[3] Brett Meehan. Predicting nba shots. https://cs229.stanford.edu/proj2017/final-reports/5132133.pdf, 2017. Stanford CS229 Project Report.

[4] OddsAPI.io. Odds api: Real-time and historical sportsbook data. https://odds-api.com/, 2025. Accessed July 2025.

[5] Stanford CS231n Group Project. Scoring with few shots: Applying few-shot learning to basketball analytics. https://cs231n.stanford.edu/2024/papers/scoring-with-few-shots-applying-few-shot-learning-to-basketball-.pdf, 2024. Stanford CS231n Final Paper.

[6] Saahil Shah and Rob Romijnders. Applying deep learning to basketball trajectories. https://arxiv.org/abs/1608.03793, 2016. arXiv preprint.

[7] SIFMA Insights. Global equity markets: A comparison. https://www.sifma.org/wp-content/uploads/2024/09/SIFMA-Insights-Primer_Global-Equity-Markets-Comparison_FINAL.pdf, 2024. Accessed July 2025.

[8] Sports Reference LLC. Baseball reference. https://www.baseball-reference.com/, 2025. Accessed July 2025.

[9] Sports Reference LLC. Basketball reference. https://www.basketball-reference.com/, 2025. Accessed July 2025.

[10] Joel Veness et al. A reinforcement learning approach to betting on sports. https://arxiv.org/abs/1910.08858, 2019. arXiv preprint, Accessed July 2025.