



THE 3-PEAT BLUEPRINT

A Data-Driven Strategy for the LA Dodgers Championship Excellence

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Capstone Project Final Presentation





THE '3-PEAT' PROBLEM STATEMENT

SUSTAINING CHAMPIONSHIP EXCELLENCE



THE CHALLENGE

World Series winners often face 'championship hangover' or roster regression in subsequent seasons.



THE GOAL

Identify specific elite targets for 2025 to ensure statistical dominance and sustained excellence.



THE CLIENT

Dodgers Front Office
(Executive Audience)

THE DATA STRATEGY (OUR SOURCES)

MOVING BEYOND THE BACK OF THE BASEBALL CARD



DATASETS

Aggregated 2024-2025 MLB Statcast data covering both Hitters and Pitchers for comprehensive analysis.



THE NOISE

Traditional stats like AVG and ERA can be influenced by luck and small sample sizes.



THE SIGNAL

Focus on raw mechanics: Exit Velocity, Whiff Rates, and other predictive metrics.

DEFINING THE 'GOLD STANDARDS'

METRICS THAT PREDICT THE FUTURE



XWOBA (EXPECTED WEIGHTED ON-BASE AVERAGE)

Measures contact quality for hitters based on launch angle, exit velocity, and batted ball type. More stable than traditional batting average.



K% (STRIKEOUT PERCENTAGE)

Measures pure dominance and high-leverage reliability for pitchers. Stabilizes faster and predicts postseason success better than ERA.

Why? These metrics stabilize faster and are better predictors of post-season success than traditional statistics.



METHODOLOGY: THE PREDICTIVE ENGINE

MODELING ELITE PERFORMANCE

MODEL SELECTION

Random Forest Regressor chosen for its ability to handle complex non-linear relationships in player performance data.

PROCESS

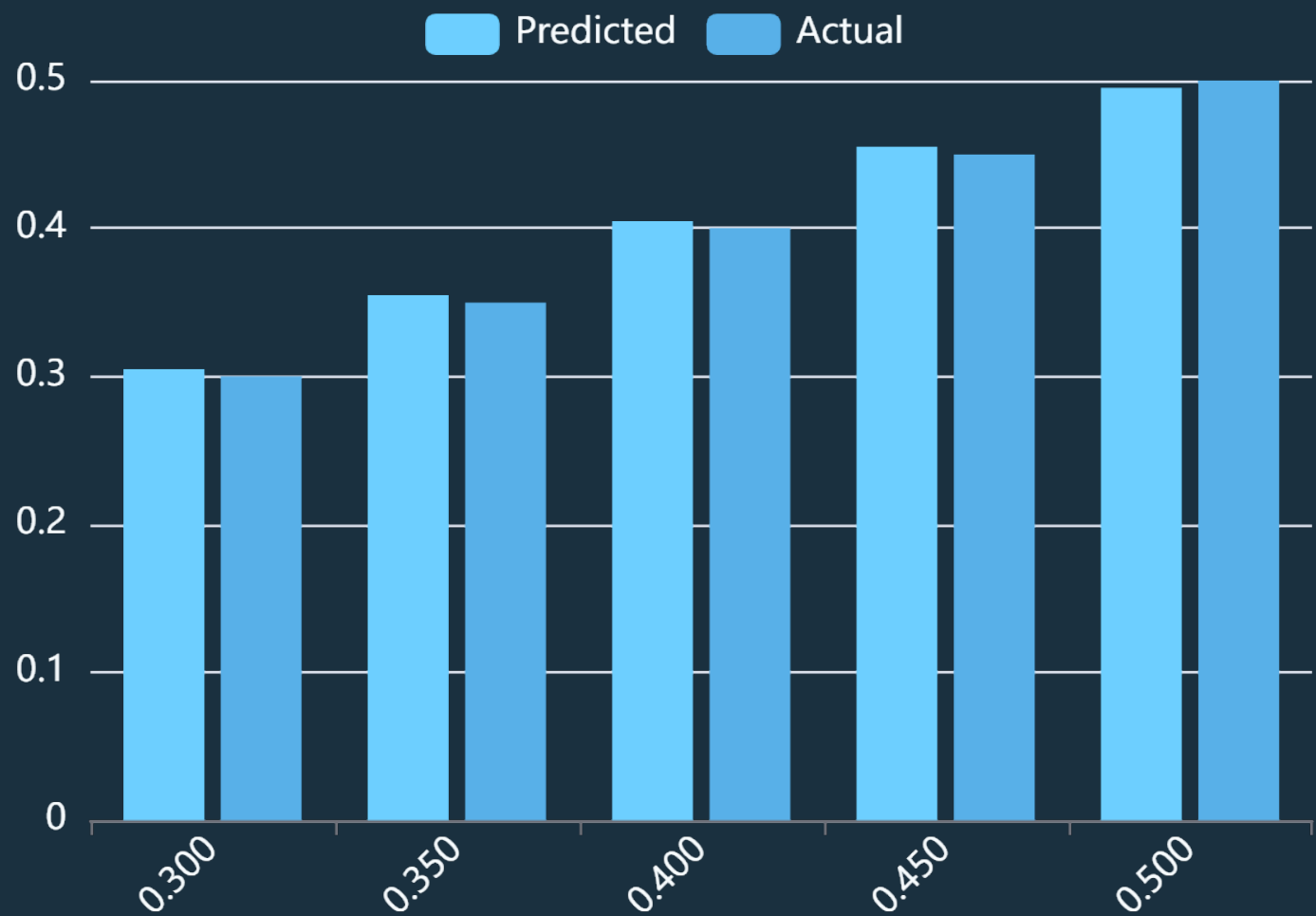
Used mechanical inputs (Barrel%, Launch Angle, Bat Speed) to predict a player's 'true talent' xwOBA beyond surface-level results.

VALIDATION

80/20 Train-Test split to ensure we aren't just memorizing old stats but predicting future performance accurately.

MODEL PERFORMANCE (THE PROOF)

Predicted vs Actual xwOBA



HIGH PRECISION

MAE: 0.0436 - The model is accurate within approximately 4% of actual xwOBA values.

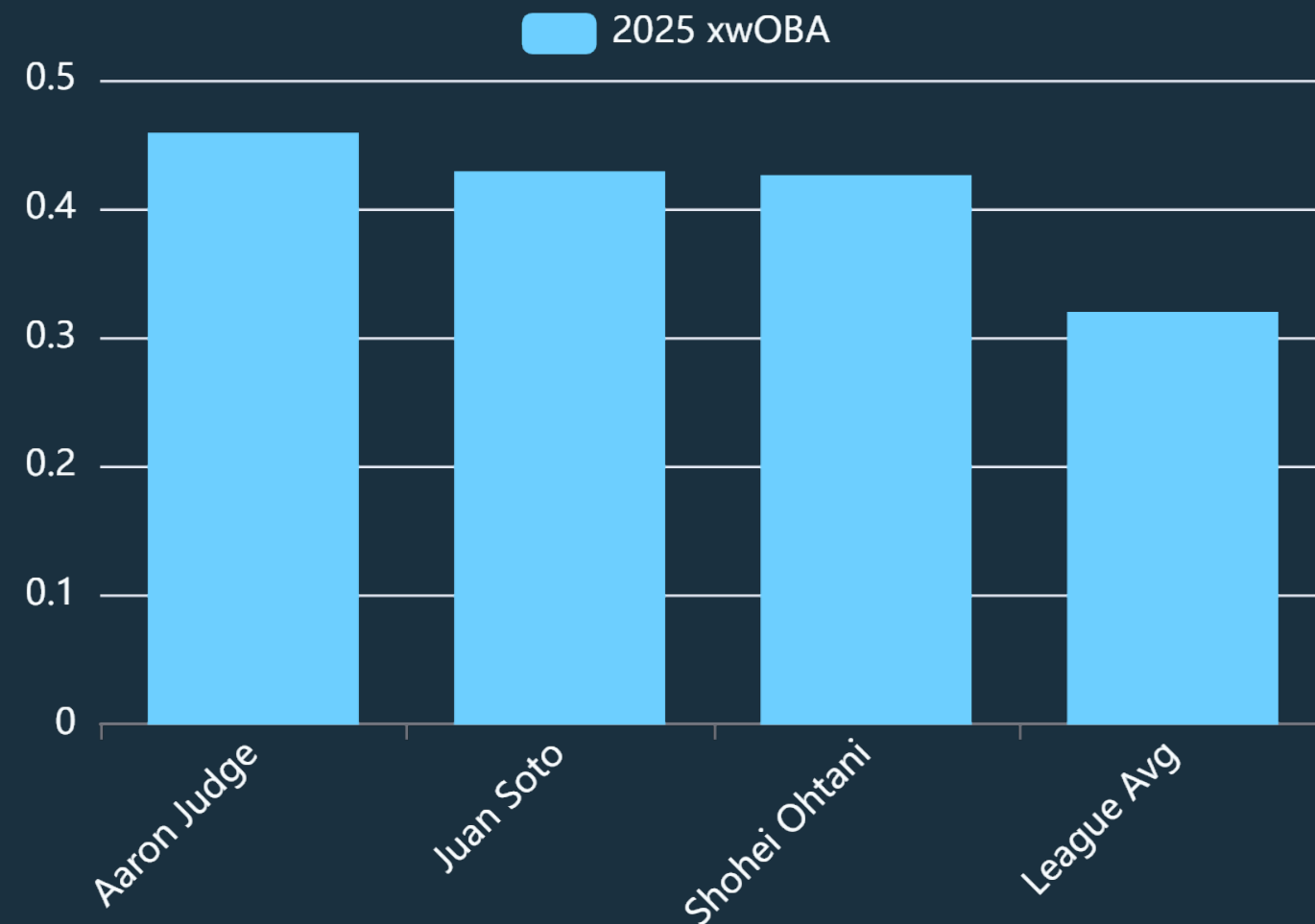


STRONG PREDICTIVE POWER

R² Score: 0.6139 - Over 61% of performance variance is explained by the raw mechanics tracked.

2025 HITTER TARGETS

Top Elite Hitters by xwOBA



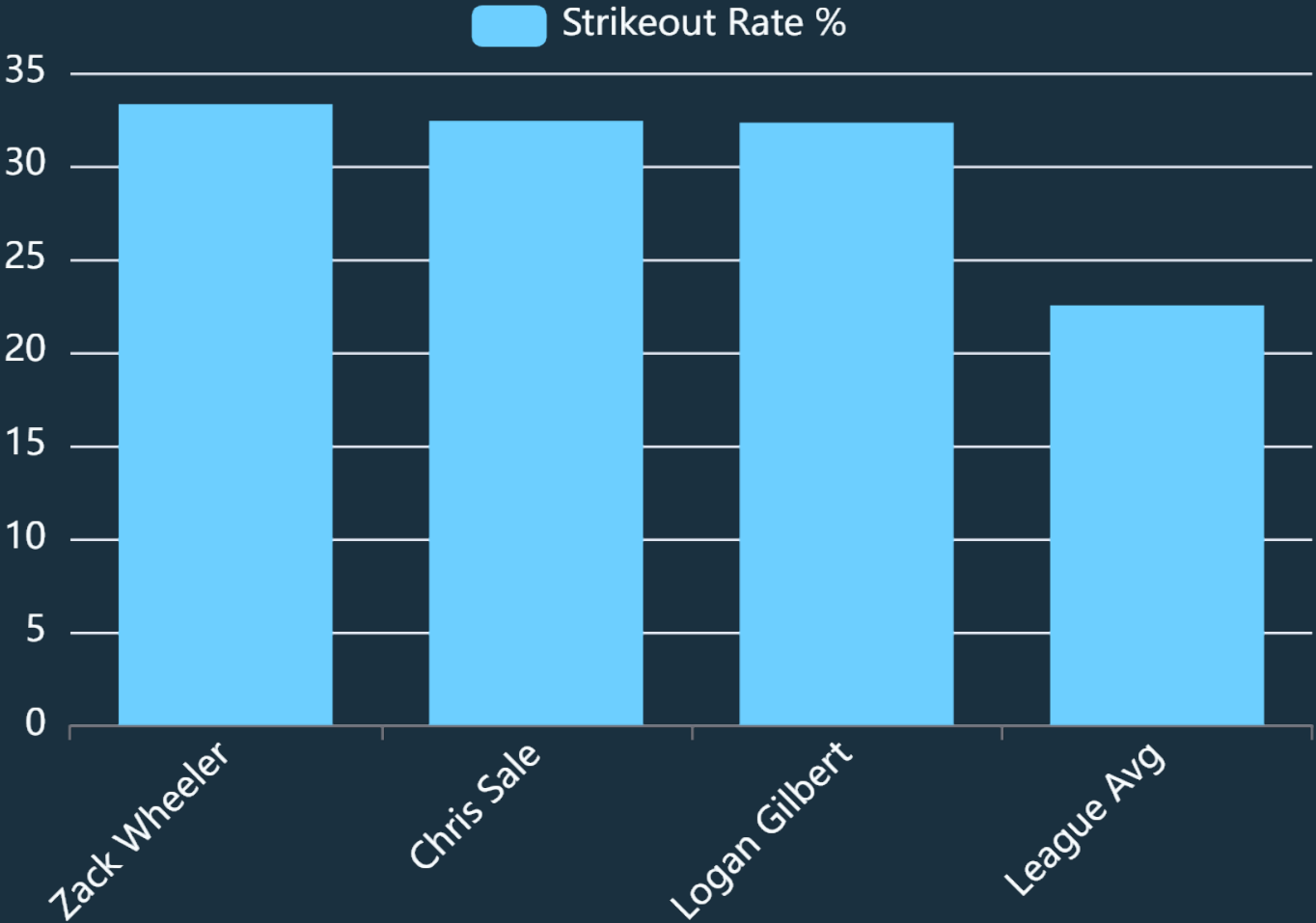
THE ELITE OFFENSIVE FLOOR

These three players represent the highest echelon of offensive production based on contact quality metrics. Their xwOBA values significantly exceed league average, providing championship-caliber offensive insurance.

- Aaron Judge: 0.459 xwOBA - Elite power and contact quality
- Juan Soto: 0.429 xwOBA - Superior plate discipline and barrel rates
- Shohei Ohtani: 0.426 xwOBA - Dual-threat elite offensive production

2025 PITCHING TARGETS

Top Elite Pitchers by K%



NEUTRALIZING THE OPPONENT

Elite strikeout pitchers reduce bullpen stress during playoff runs and provide consistent high-leverage performance. These three arms represent the highest K-rates in baseball, ensuring postseason dominance.

- Zack Wheeler: 33.3% K-Rate - Ace-level whiff generation and durability
- Chris Sale: 32.4% K-Rate - Elite swing-and-miss stuff with playoff experience
- Logan Gilbert: 32.3% K-Rate - Emerging ace with elite strikeout capability

STRATEGIC RECOMMENDATIONS

ACTIONABLE INSIGHTS FOR THE FRONT OFFICE



PURSUE A 'MEGA-OUTFIELDER'

Signing Soto or Judge provides an outlier offensive floor that protects against Ohtani/Betts regression and ensures lineup depth for October baseball.



THE 'WHIFF' ROTATION

Prioritize Zack Wheeler to ensure the bullpen isn't overworked during the playoffs. Elite K-rates reduce defensive stress and provide postseason reliability.



DATA-FIRST SCOUTING

Use the xwOBA predictive model to evaluate internal prospects before trading them. Identify undervalued talent based on mechanics, not luck.

A person wearing VR goggles is shown from the chest up. Above their head is a large, semi-transparent thought bubble. Inside the bubble, the text 'QUESTIONS FOR THE FRONT OFFICE?' is written in large, bold, blue capital letters. Below this, in smaller blue capital letters, is the sentence 'DATA ISN'T JUST FOR SPREADSHEETS; IT'S THE INSURANCE POLICY FOR A 3-PEAT.' To the left of this sentence is a large, stylized red 'X' mark. The background of the entire image is a solid dark blue.

QUESTIONS FOR THE FRONT OFFICE?

DATA ISN'T JUST FOR SPREADSHEETS; IT'S THE INSURANCE POLICY FOR A 3-PEAT.

