

A white golf ball with a dimpled texture sits on a lush green golf course. In the background, a tall flagstick with a white flag is visible against a blue sky with scattered white clouds. The green is well-maintained with visible mowed stripes. The overall scene is bright and clear, suggesting a sunny day.

PrecisionPicksPGA

Agenda

1. What is Golf?
2. What is Sports Betting?
3. Vision & Impact
4. Dataset & Visualizations
5. Next Steps



What is Golf?

SUMMARY OF THE SPORT

- Played on an 18 hole course spanning thousands of yards
- Objective is to hit the ball into each hole in the fewest strokes
- Baseline score for most courses is 72 strokes
- Various different shots to hit such as driving, chipping, etc.

PGA TOUR TOURNAMENT

- 4 rounds of 18 holes each, played over 4 days (Thu-Sun)
- Approx. 120 players competing against each other
- Player with the lowest total score wins
- New competition begins every week in a different location



What is Sports Betting?

SUMMARY OF SPORTS BETTING

- Individuals can bet money on certain outcomes occurring
- Every bet has odds representing the likelihood of an event occurring which determines how much you win
- Bets can be placed online or in-person for most sports

GOLF BETTING

- Golf bets come in many forms:
 - Guessing the winner
 - Predicting an individual to finish in the top 5, 10, or 20
 - Wagering on the winner out of 3 players in a group
 - Betting on one player to finish better than another

Impact & Vision

INDUSTRY IMPACT

- **In 2018**, the Supreme Court reversed a federal law banning sports betting
 - Approx. **38 states** have legalized sports betting, both in-person and online
- In less than 5 years, the legal online sports betting market in the U.S. surpassed **\$10 billion** by 2023
- The market is expected to reach **\$45 billion** annually at market maturity

VISION

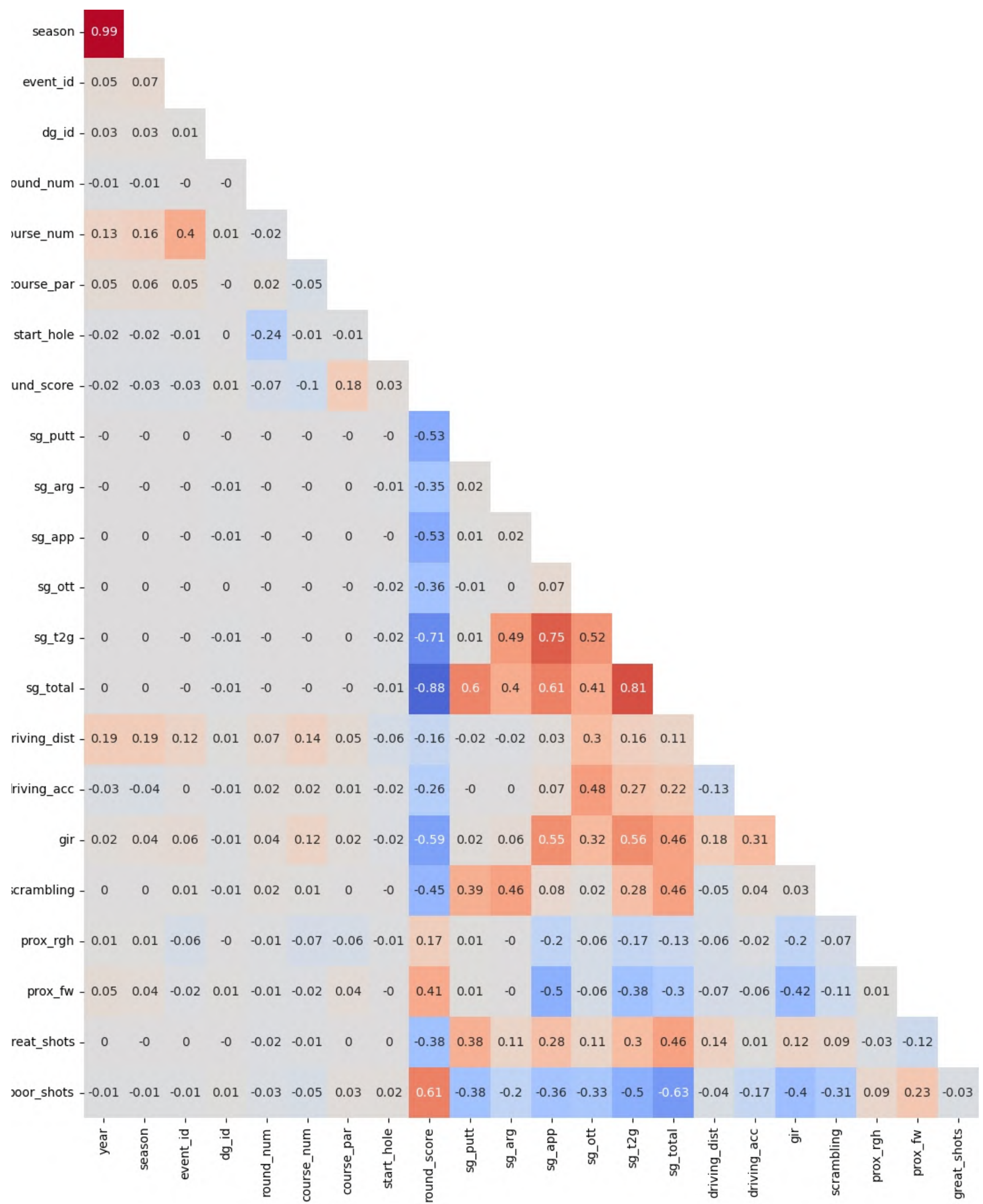
- **Growing Trend:** As the number of sports bettors increases, navigating the complexities of betting becomes challenging.
- **Reality:** Many are unaware that the break-even point for betting odds exceeds a 50% probability, as set by casinos.
- **Objective:** Dissect the art of betting by analyzing individual player trends & skills in head-to-head matchups with machine learning
- **Outcome:** Equip individuals with the knowledge needed to make more informed decisions

Intro to Dataset

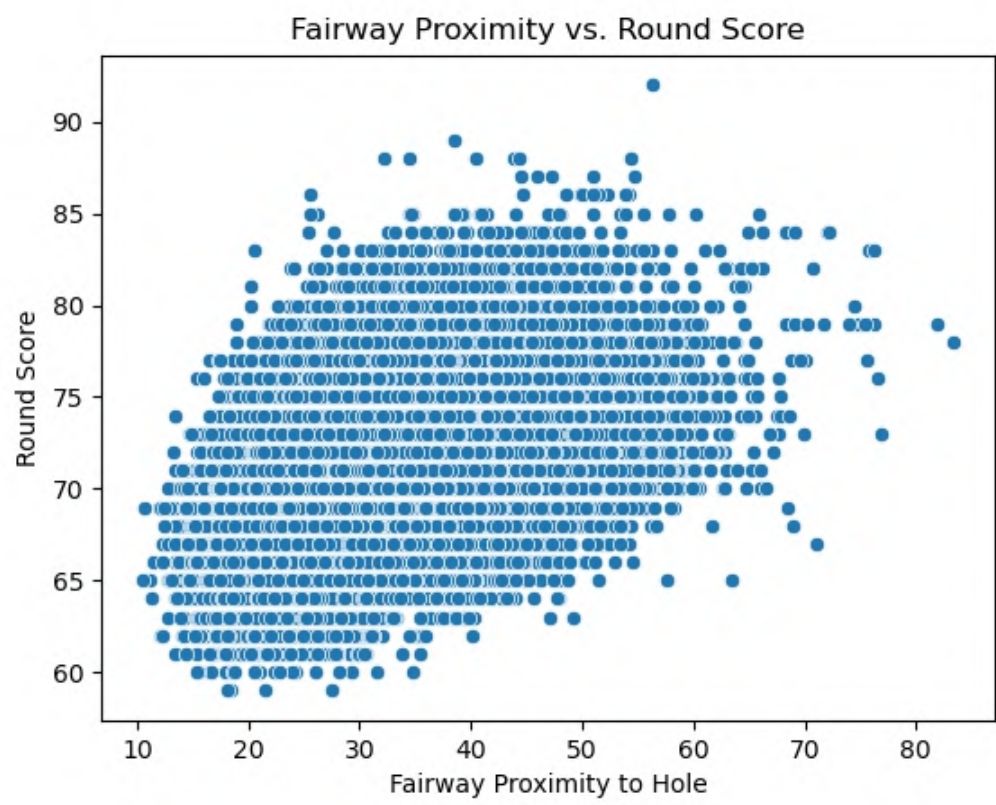
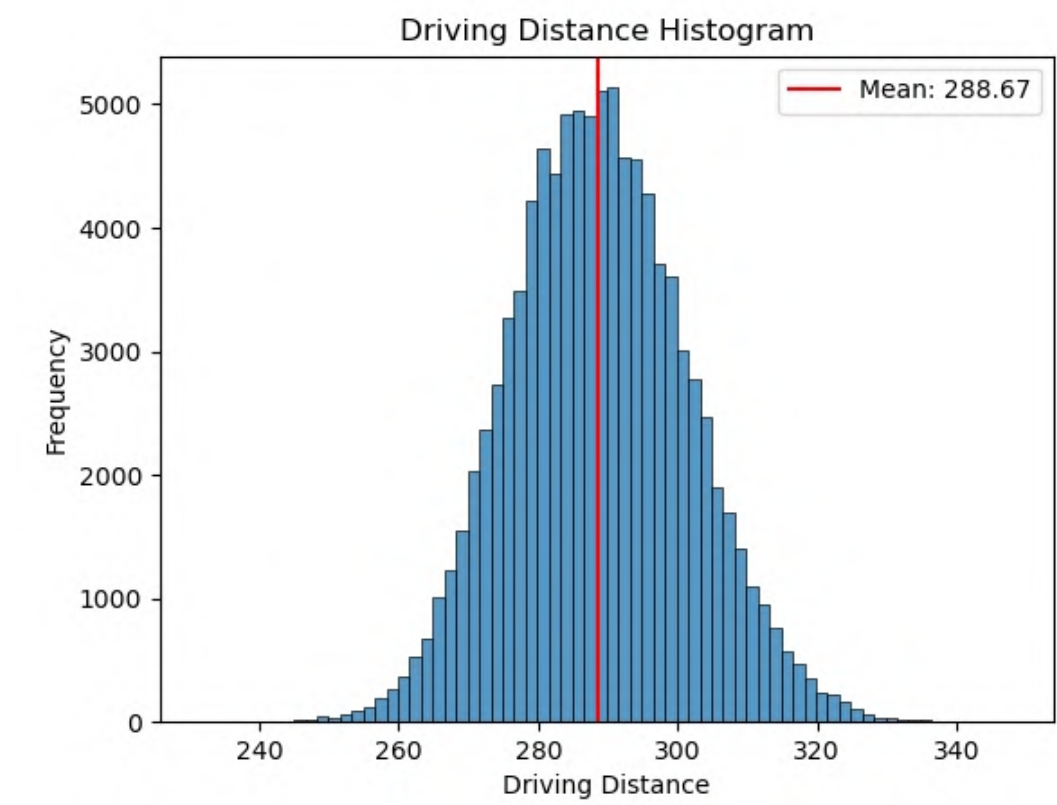
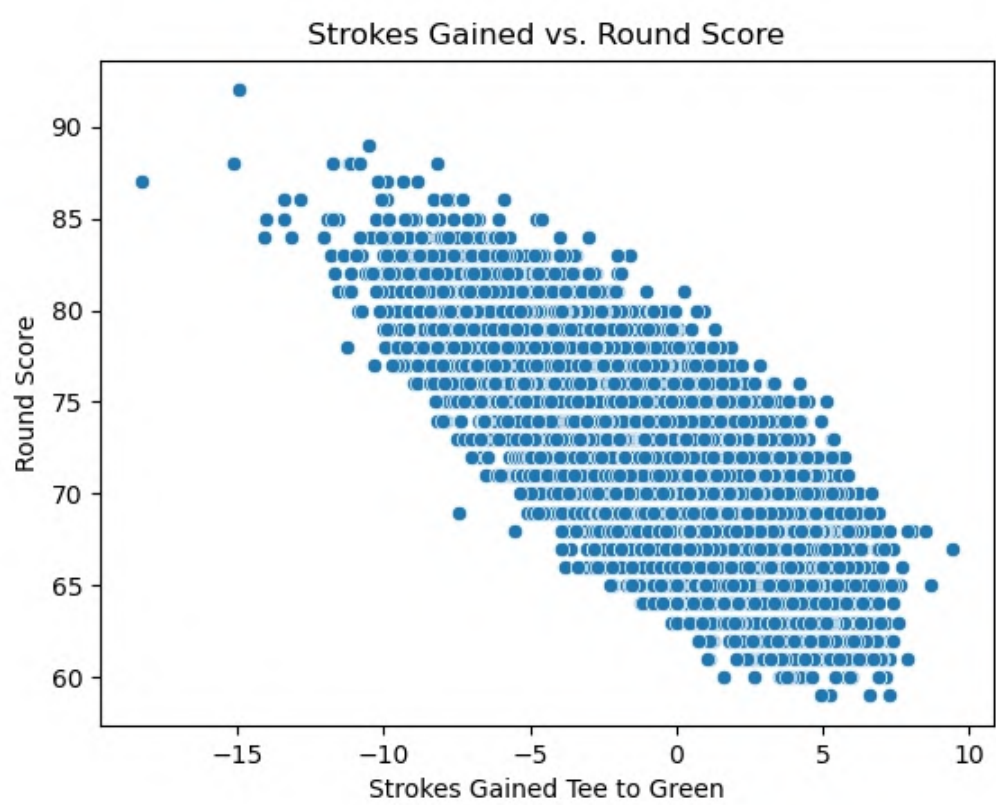
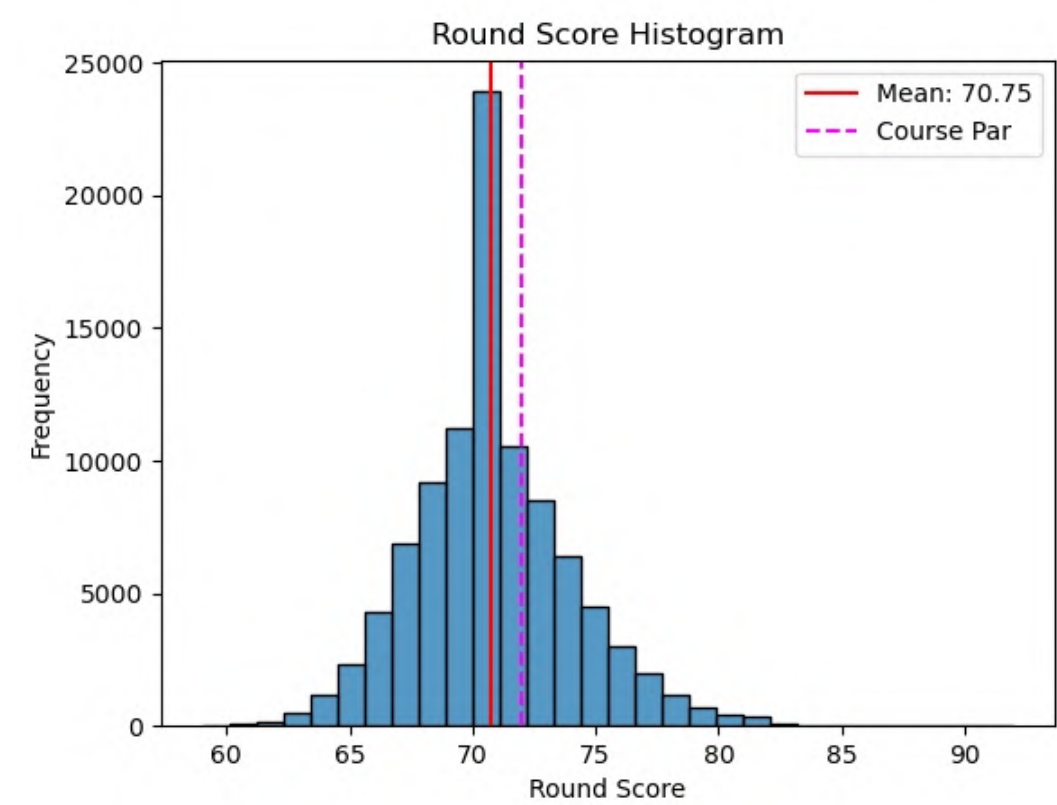
FOUR DISTINCT TABLES

- 1. Round Scoring, Stats & Strokes Gained
 - Shape: (128861, 30)
 - Includes detailed player statistics dating back to 2017
- 2. Historical Betting Odds
 - Shape: (266941, 28)
 - Includes betting results dating back to 2019
- 3. Official World Golf Rankings
 - Shape: (500, 10)
 - Contains ranking information for top 500 players
- 4. Course Statistics
 - Shape: (88, 27)
 - Contains detailed course attributes for 88 courses

SOURCE: DATAGOLF



Preliminary Data Visualizations



Next Steps:

1. Concatenate all dataframes to prepare for modeling
2. Engineer additional features
3. Determine best model(s) to utilize based on availability of features