Disc Golf

Disc golf is a rapidly growing sport where players attempt to throw a disc from a teeing area to a basket in as few strokes as possible. Similarly to golf, the main types of throwing are driving and putting, and players need many different shots to complete each hole efficiently. A famous quote from golf says “Drive for show, putt for dough”, implying that putting is less interesting but is what ultimately makes a golfer successful. Does the same principle apply to disc golf?

The Disc Golf Pro Tour data set (DGPT.csv) has statistics with variables for throwing statistics and performance statistics. These include driving statistics (Parked, Circle 1 in Regulation, Circle 2 in Regulation, Fairways hit, Total Strokes Gained Tee to Green), putting statistics (Circle 1X Putting, Circle 2 Putting, Total Strokes Gained Putting), and performance statistics (Birdie Average, Top 10s, Average Place, Total Earnings).

Definitions:

Birdie Average: The average number of birdies a player achieves during an 18 hole round.

Strokes Gained(SG): This is the number of strokes by which a player exceeds the performance of the field either putting or throwing.

Driving Definitions:

Parked: When a player’s drive or approach comes to rest within 3.3m(~11ft) of the basket in regulation.

Circle 1 in Regulation(C1R): When a player’s disc comes to rest within 10m(33ft) of the hole in 1 throw on a par 3, 2 throws on a par 4, and 3 throws on a par 5.

Circle 2 in Regulation(C2R): The same as C1R but extending to 20m(66ft).

Putting Definitions:

Circle 1X Putting(C1X): The percent of putts made from Circle 1 excluding putts inside 10ft.

Circle 2 Putting(C2R): The percent of putts made from Circle 2 (10m-20m/33ft-66ft).

1. Is Fairways Hit(FWY) or Strokes Gained Tee to Green(tot\_SG.TG) a better predictor of Total earnings, what is the correlation.

Strokes Gained Tee to Green, r = 0.7440090

1. Plot the better predictor with Total earnings and describe the graph. Does it represent a linear relationship?

The graph between Strokes Gained Tee to Green and Total Earnings has a strong positive relationship. The graph is somewhat linear but could also be characterized as exponential.

1. What is a better predictor of Birdie Average, Circle 1X putting(C1X) or Circle 1 in regulation(C1R)?

Circle 1 in regulation, r = 0.8446988

1. Plot the better predictor with Birdie Average and characterize the relationship between the two.

The graph between Circle 1 in regulation and Birdie Average has a strong/moderate positive linear relationship.

1. What is a better predictor of Top 10 finishes, Circle 2 Putting(C2P) or Circle 2 in regulation(C2R)?

Circle 2 in regulation, r = 0.6330398

1. Plot the better predictor vs. Top 10 finishes and report whether the graph represents a linear relationship.

The graph between Circle 2 in regulation and Top 10 finished has a moderate positive linear relationship.

1. What driving variable is most strongly correlated with a performance variable?

Total Strokes Gained Tee to Green is most strongly correlated with the performance variable Average Place.

r = -0.8464208

1. What driving variable is least strongly correlated with a performance variable?

Fairways hit is least strongly correlated with the performance variable Total Earnings.

r = 0.5061334

1. What putting variable is most strongly correlated with a performance variable?

Total Strokes Gained Putting is most strongly correlated with the performance variable Total Earnings.

r = 0.5025279

1. Plot the least correlated driving variable vs. a performance variable and the most correlated putting variable vs. a performance variable and compare the relationships.

The relationship between Fairways Hit and Total Earnings is a moderate positive relatively linear relationship. The relationship between Total Strokes Gained Putting and Total Earnings is similarly structured with a moderate positive linear relationship. There is slightly less correlation between Total Strokes Gained Putting and Total Earnings than Fairways Hit and Total earnings.

1. Of the performance variables (Birdie Avg, Top 10s, Average Place, Total Earnings), which is the most easily predictable?

For driving statistics, either Birdie Avg or Average Place is most easily predictable, while putting predicts Average Place slightly better than Birdie Average. Average Place is overall the most easily predictable but others could be argued

1. Based on the previous questions, what is a better predictor of success in disc golf, driving or putting? What statistic should players look to improve if they want to increase their earnings and success?

Driving is a significantly better predictor of success than putting. The specific statistic that players should look to increase their earnings is Total Strokes Gained Tee to Green. It encompasses all driving statistics so for a specific throwing statistic, Circle 1 in Regulation leads to the highest Birdie Average which help overall scoring and success.