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 has statistics with variables for throwing statistics and performance statistics. These include driving statistics (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, Total Earnings).

Definitions:

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).

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

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).

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

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|  | C1R | C2R | FWY | SG:TG | C1X | C2P | SG:P | Birdie Avg | Top 10s | Total Earnings |
| C1R | 1 | 0.9115 | 0.7406 | 0.9083 | -0.1405 | 0.0138 | -0.0002 | 0.8446 | 0.6264 | 0.6275 |
| C2R | 0.9115 | 1 | 0.8202 | 0.8476 | -0.0691 | 0.0128 | 0.0366 | 0.8029 | 0.6330 | 0.6141 |
| FWY | 0.7406 | 0.8202 | 1 | 0.6979 | -0.0232 | 0.0571 | 0.0835 | 0.6583 | 0.5472 | 0.5061 |
| SG:TG | 0.9083 | 0.8476 | 0.6979 | 1 | -0.0503 | 0.0939 | 0.0930 | 0.8320 | 0.7099 | 0.7440 |
| C1X | -0.1405 | -0.0691 | -0.0232 | -0.0503 | 1 | 0.3418 | 0.8679 | 0.2668 | 0.3076 | 0.3331 |
| C2P | 0.0138 | 0.0128 | 0.0571 | 0.0939 | 0.3418 | 1 | 0.6760 | 0.3612 | 0.3592 | 0.3397 |
| SG:P | -0.0002 | 0.0366 | 0.0835 | 0.0930 | 0.8679 | 0.6760 | 1 | 0.4440 | 0.4974 | 0.5025 |
| Birdie Avg | 0.8446 | 0.8029 | 0.6583 | 0.8320 | 0.2668 | 0.3612 | 0.4440 | 1 | 0.7942 | 0.8020 |
| Top 10s | 0.6264 | 0.6330 | 0.5472 | 0.7099 | 0.3076 | 0.3592 | 0.4974 | 0.7942 | 1 | 0.9225 |
| Total Earnings | 0.6275 | 0.6141 | 0.5061 | 0.7440 | 0.3331 | 0.3397 | 0.5025 | 0.8020 | 0.9225 | 1 |

1. Between Fairways Hit and Circle 2 putting, which is a better predictor of Total Earnings? What is the correlation?

Fairways hit, r = 0.5061

1. Is there a stronger correlation between Birdie Average and Circle 1X putting or Circle 1 in regulation throwing? What is the correlation?

C1R, r = 0.6275

1. What is a better predictor of Top 10s, Circle 2 putting or Circle 2 in regulation? What is the correlation?

C2r, r = 0.6330

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

C1R and Birdie Average, r = 0.8446

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

Fairways hit and Total Earnings, r = 0.5061

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

Strokes Gained Putting and Total earnings, r = 0.5025

1. What is more strongly correlated with Top 10s and Total Earnings, Strokes Gained Tee to Green or Strokes Gained Putting?

Strokes gained tee to green, r = 0.7099 and 0.7440.

1. Based on the correlation, what skill is more likely to generate success in disc golf, driving or putting?

Driving, the correlation between driving variables and success variables is higher than the correlation between putting variables and success variables. The lowest correlation between driving variables and success variables is higher than the highest putting variable correlation.