Project Part 1

Statistical Trends in Golf

Background Information

Golf is an incredibly difficult sport both mentally and physically. With the new analytics boom in all sports, golf has followed suit with consistently new technology in golf balls, clubs, and swing analysis. I want to research what aspects of the game truly make the difference between those golfers consistently competing for major tournament titles and those fighting to make the cut in all of their tournaments. My goal is to find statistical trends among these golfers that can be useful to explain differing success on the PGA Tour.

Research Question #1

Which is more impactful towards success among PGA Tour Golfers: Driving or Putting?

This is one of the most talked about aspects of golf today. With many golfers trying to increase their driving distance, I want to research if there is statistical evidence to support this transition. There are still golfers who don't hit the ball far at all and still compete with the big drivers, so I want to analyze any statistical trends in either direction (1). I will be able to measure success by analyzing how often players finish in the top five, 10, and 20 in tournaments and use each grouping as a basis of success. Earnings can also be used to analyze this as tournament prizing is based on resulting position and also the size / importance of the tournament itself.

Research Question #2

Do more older PGA Tour golfers have more success in majors?

It always seems that most of the major tournament winners or those competing for the win in the biggest tournaments are typically household golf names. I want to research if this is due to the media's extra coverage of more well-known golfers or if the more experienced golfers actually do play better in high leverage tournaments. Because there is such a small amount of PGA golfers who make it on tour later in their career at an older age, I feel safe analyzing this data with the understanding that the older golfers are more experienced.

Research Question #3

Does fairway accuracy and greens in regulation affect the total strokes gained?

A more recent, advanced golf analytic is called strokes gained. This simply measures the golfer's performance compared to the rest of the field in a specific event (2). I want to research if a higher fairway accuracy and higher greens in regulation rate for a golfer leads to more strokes gained against the field and thus more tournament success. Strokes gained is the most trusted analytic in golf today in judging how well a golfer performed, so it will be interesting to know the magnitude of the importance of hitting the fairway and green with consistency, even among the best golfers in the world.

Data and Population of Interest

The population that is of interest for these research questions is golfers on the PGA Tour. I want to research the above questions using PGA Tour data which includes the statistics of these golfers dating back to 2010 (1). This data should contain all relevant golf statistics, players' ages and earnings, and more advanced golf analytics as well (2). Once I acquire this data, it can be broken down into smaller subsets by analyzing how long their average drive is (question 1), how old a player is (question 2), PGA Tour leaders in strokes gained (question 3), and/or other relevant statistics.

References

1. https://www.pgatour.com/stats.html
2. https://www.advancedsportsanalytics.com/pga-user-guides