Path to the PGA

The world of professional golf is constantly changing, with players frequently transitioning between different tours to face new challenges and seize opportunities for growth and success. The DP World Tour, renowned for its competitive field and diverse group of players, has been a breeding ground for numerous golf talents. These players have not only made their mark regionally but have also showcased exceptional skill in various aspects of the game, as evidenced by their impressive strokes gained metrics.

Strokes gained is a comprehensive statistical measure that evaluates a player's performance in comparison to the field across different categories, such as off the tee, approach to the green, around the green, and putting. This metric provides a detailed insight into a player's strengths and weaknesses, allowing for a unique analysis of their overall performance. It is through this lens that we can identify which players from the DP World Tour possess the potential to excel on the PGA Tour.

This report aims to look into the data, highlighting the standout performers on the DP World Tour who have demonstrated significant strokes gained in multiple categories. By analyzing these metrics, we seek to determine which players are best positioned to transition to the PGA Tour and make an impact on the course and on their earnings. The findings from this analysis will not only spotlight individual talents but also contribute to the broader understanding of how performance metrics can guide strategic decisions in professional golf.

In 2011, Mark Broadie, a professor at Columbia University, introduced the golf world to the concept of Strokes Gained. Initially developed as a statistic for putting, Strokes Gained

quickly expanded to assess performance in several other areas: off the tee, approach shots, and around the greens. This innovative metric has fundamentally transformed how golfers evaluate their performance across rounds, tournaments, and entire seasons. The math to calculate strokes gained is nothing new to the world of golf, but we look to provide insight on which players should be making the transition from the DP World Tour to the PGA Tour in order to compete on a higher playing field and to thicken their pockets with larger purses across the season of the PGA.

While there have been a few reports that try to look at the connection between strokes gained and earnings, many of them will only look at one strokes gained metric (i.e. putting, or off the tee). This report aims to look at the 4 main strokes gained metrics and then compare that to earnings.

We started by pulling data from the 2018 to 2022 seasons. With this, we looked at each tournament and evaluated the strokes gained in six categories. These were strokes gained putting, strokes gained around the green, strokes gained on approach shots, strokes gained off the tee, strokes gained from tee to green, and total strokes gained. We used these metrics to compare the positions that players finished in each tournament.

After running correlation matrices, linear models, random forest models, and XGBoost models; we determined that each had some significance to where a player would finish in any given tournament. There were four strokes gained metrics that had strong significance to a player's earning. These were strokes gained off the tee, strokes gained on approach shots, strokes gained around the green, and strokes gained putting. We left out the other two since those are simply combinations of some of the four originals. Our next step

was to look at earnings for each tournament and how these different strokes gained would impact on any given players' results and money made.

After many lines of coding, we were able to determine that the XGBoost model would be the best predictor of earnings for players in the DP World Tour if they were to come over and compete on the PGA Tour. So now we had to go through and evaluate each player on the DP World tour from the 2023 season and how it compared to PGA player data that we acquired.

We were able to get their stats from europeantour.com/dpworld-tour/stats/ and plug in their strokes gained to our model to get a rough estimate of how much in earnings they would receive in a tournament. One player that stands out over the rest is Zander Lombard, who turned pro in 2014. His strokes gained in the four major categories would set him up for immediate success on the PGA Tour. His comparable players on the PGA Tour are Patrick Cantlay, Colin Morikawa and Max Homa. Cantlay is an eight time PGA Tour winner, three time Presidents Cup winner, one time Ryder cup winner and was the FedEx Cup champion in 2021. Colin Morikawa is a six time PGA Tour winner and two time Major winner, two time Presidents Cup winner, one time Ryder Cup winner, and currently ranked fourth best golfer in the world. Max Homa is a six time PGA Tour winner and a two time Presidents Cup winner. So, it is safe to say that Zander Lombard would be settled in good company if he made the transition to the PGA Tour and was able to keep his strokes gained metrics at the same level.

Trying to predict which players will have success on the PGA tour is a rather daunting task, and there is still much more room for improvement. The data could be scaled to take

into account courses and conditions, or possibly take a more holistic view and look at career earnings compared with career strokes gained statistics to try to get a glimpse of who could do well on the PGA tour in the long run. Based on the data and predictions we made, it was really interesting to see who from the DP world tour had strokes gained metrics that were on par with the PGA tour, but maybe have not broken through to any tournament wins yet. This also suggests that there are likely many more aspects of the game that go into a player winning or being successful in a tournament, other than strokes gained.

<u>Contributions</u>

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Works Cited

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