

A machine-learning analysis of results on the PGA TOUR



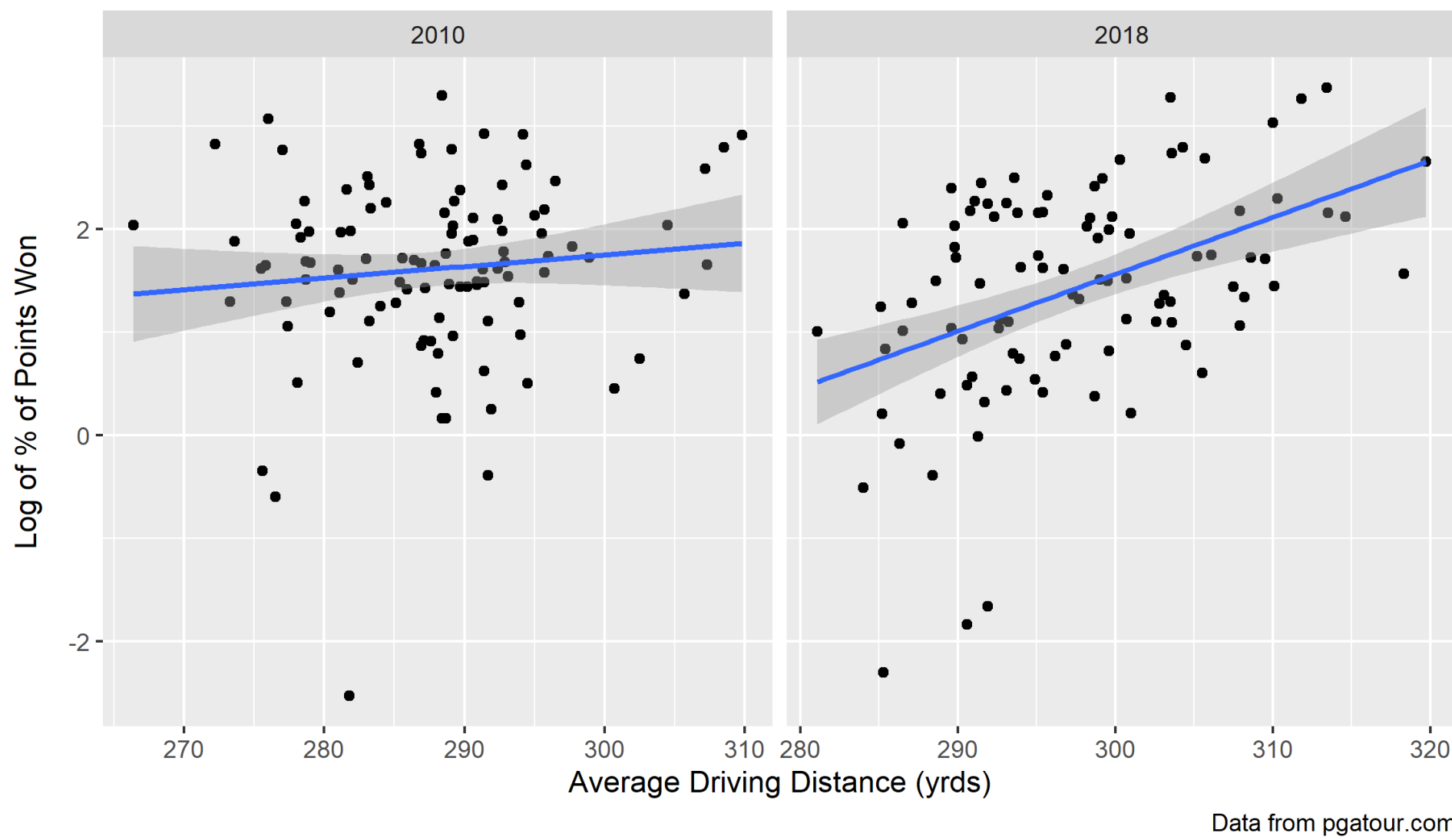
Player Skills and Tour Success

This research investigated the importance of five different player skills to a golfer's success on the PGA Men's Professional Tour between 2010 and 2018

- Driving Distance
- Driving Accuracy
- Putting
- Rough Play
- Greenside Bunker Play

The Changing Importance of Player Skills: Regression Analysis

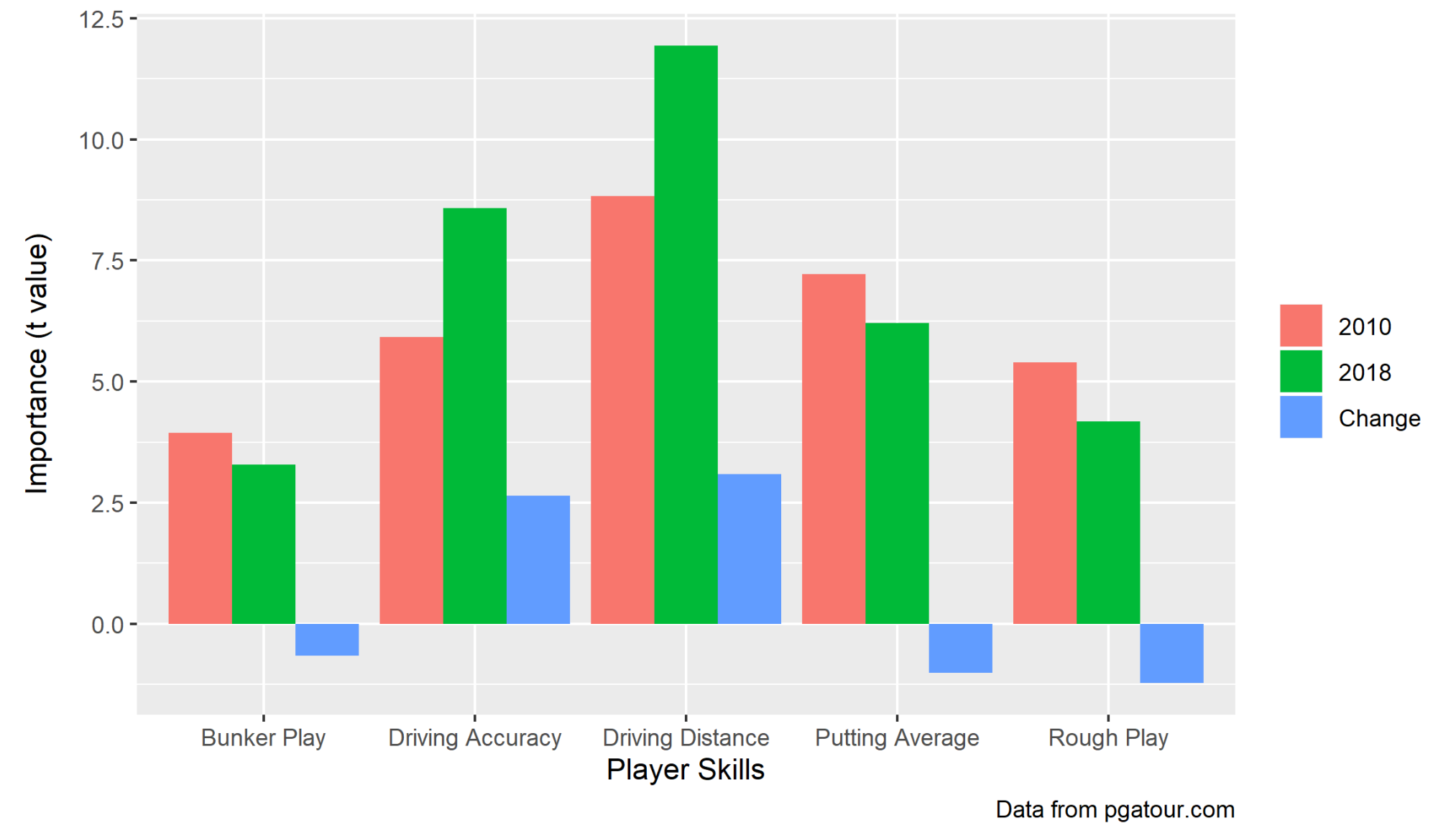
How far you hit off the tee has become more important . . .



- The chart on the right shows the importance (t value) of our five player skills in multilinear regression modelling of TOUR success in 2010 and 2018.
- We see again that driving distance is the most important skill.
- However, driving accuracy has also increase in importance .
- Putting was the 2nd most important skill in 2010. However by 2018 it had now fallen to third, well behind distance and accuracy.
- Short game skills (playing out of greenside bunkers and the rough) have also diminished over the period.

- Analysis of average driving distances (how far a player can hit off the tee) between 2010 and 2018 showed a modest rise of 2.8%
- However, correlation with TOUR success (percentage of Points Won) increased considerable.
 - Driving Distance alone explained only 2.5% of Points Won in 2010.
 - In 2017 it was 20%,
 - In 2018 it drop back slightly to 16%

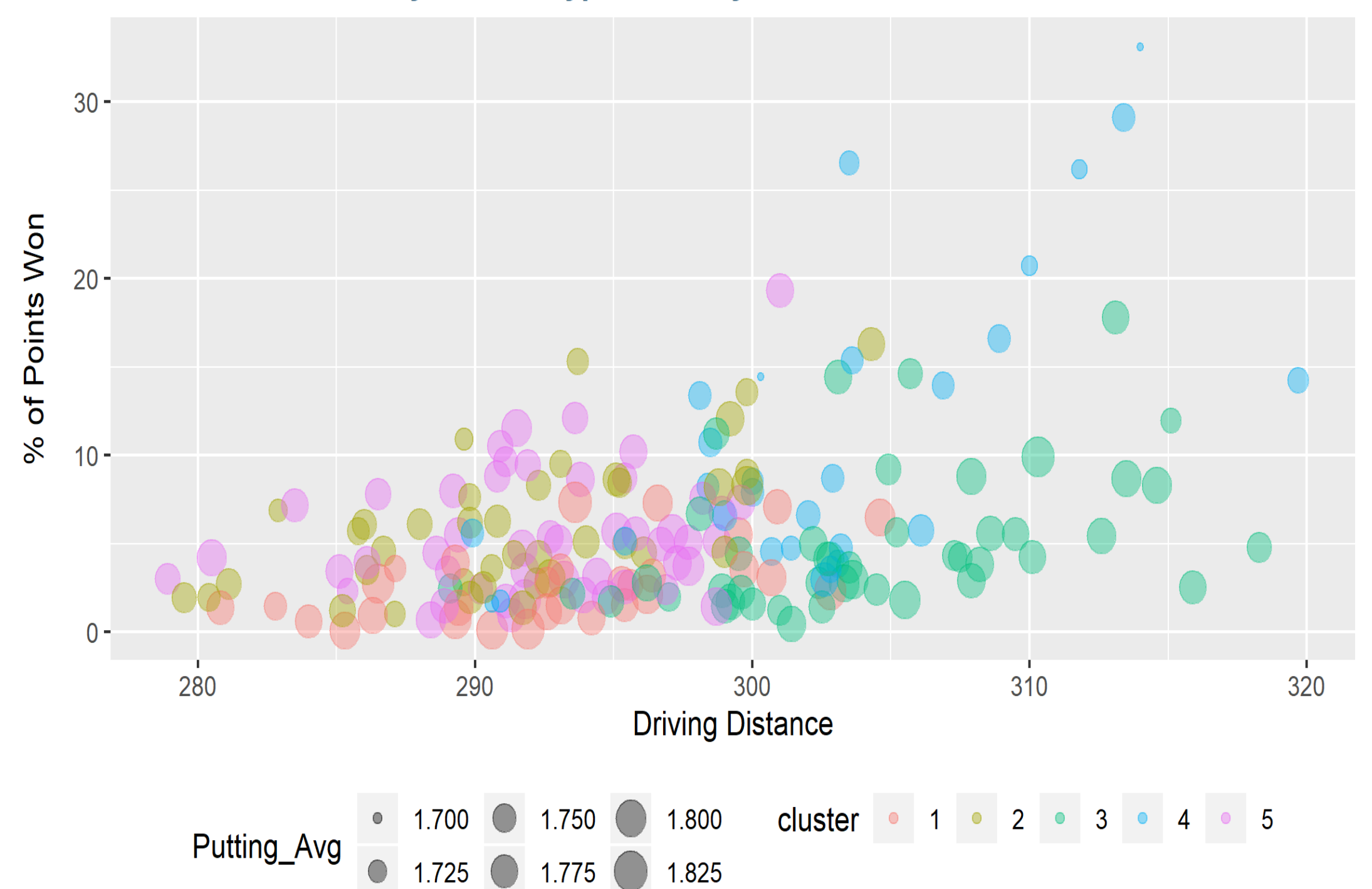
. . . whilst putting and short game skills become less



Player Types on the 2018 Tour: Results of k-means clustering of player skills

#	Cluster name <i>Description</i>	Best Performer (Points Won)	Average Success (Points Won)
1	Struggling <i>Lower overall skill levels.</i>	Satoshi Kodaira 7.36%	2.74%
2	Short Game Experts <i>Poor off the tee, but strong bunker and rough play.</i>	Paul Casey 16.28%	6.06%
3	Driving Rangers <i>Long hitters but lower skill levels in other areas.</i>	Bubba Watson 17.81%	5.09%
4	Winning Players <i>Big drivers, excellent putting, good overall.</i>	Dustin Johnson 33.13%	11.23%
5	Robin Hoods <i>Short but highly accurate off the tee. Good from the rough.</i>	Francesco Molinari 19.33%	5.48%

2018 Tour Success by Cluster Type and Player Skills



The above analysis shows that having an average driving distance of above 290 yards is essential to winning more than 10% of points, whilst you need to hit over 300 yards to breach 20%.

However, long driving distances are not enough to determine success. The top players (shown in the top right-hand corner) have strong putting skills compared to lower performing players.