

Age and its Relationship to Driving Distance and Success

1 Executive Summary

This paper looks at the question of how players' average ages have evolved on the PGA Tour, European Tour and Web.com Tour. Further, where data is available, the link between age and success (measured by money earned and finishing position in events) and driving statistics (distance and clubhead speed) is analysed.

The average age of PGA Tour players in 2018 was 33.0, a decrease of 3.1 years since 2004, where the average age of players on the PGA Tour was at its oldest with an average age of 36.1 years. In 2018, the average age of players on the European Tour was 31.4 years, and on the Web.com Tour, the average age was 33.4 years.

Relationships are present between age and success, both in terms of year-end money list positions and finishing positions in events. On the PGA Tour, the average age of players who finish in the top 10 of events is between 0.5 and 1.5 years younger than the tour average, on the European Tour between 0 and 1 years younger, and 1 and 1.5 years younger on the Web.com Tour. However, there is considerable variation in these relationships.

Across all three tours, there is a consistent relationship between seasonal driving distance and age. On the PGA Tour, the fitted model suggests that seasonal driving distance decreases by 0.49 yards for every year in age, on the European Tour 0.54 yards and on the Web.com Tour 0.46 yards.

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2 Development of Age

Table 1 shows the average age of players in 2018.

Table 1 Average age of players in 2018.

| Tour | Average Age |
|---------------|-------------|
| PGA Tour | 33.0 |
| European Tour | 31.4 |
| Web.com Tour | 33.4 |

We now look at how age has developed on each tour in more detail.

2.1 PGA Tour

The average age of players on the PGA Tour since 1983 are presented in Figure 1.

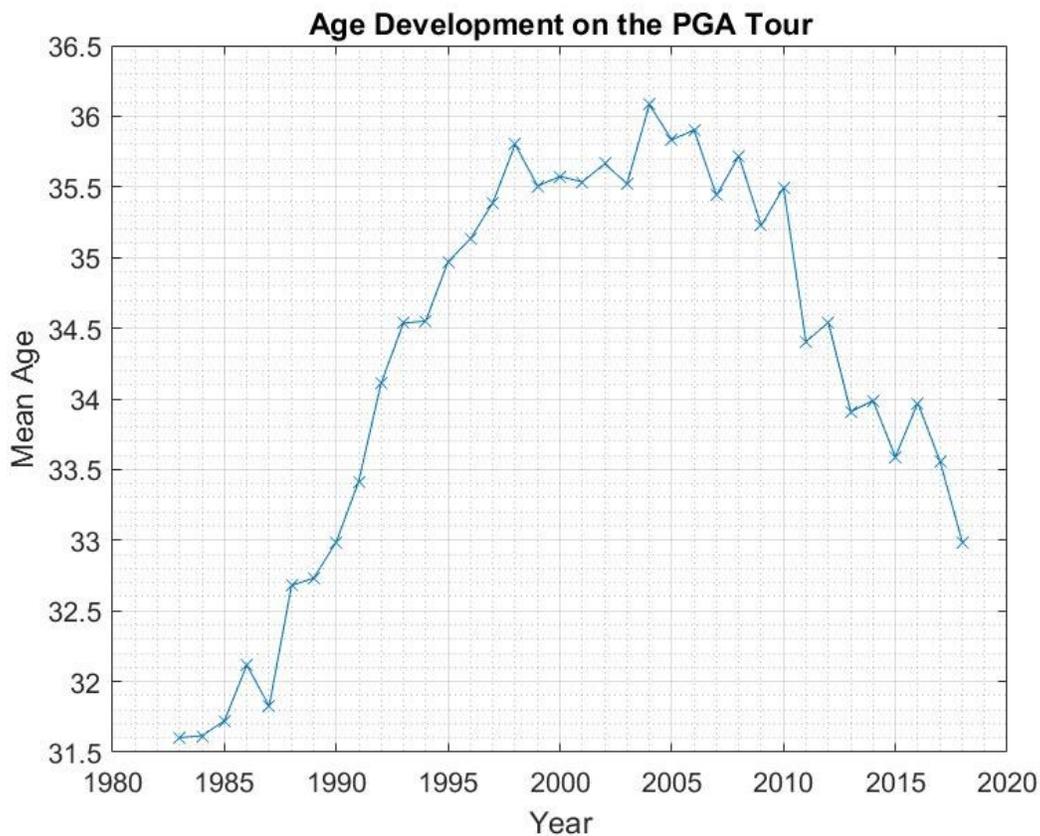


Figure 1 Mean age of players on the PGA Tour.

It had been noted previously that the average age of players on the PGA Tour had increased between the 1980s and the early 2000s. We can see that since this point the trend has reversed, and ages of

players have consistently decreased. It is worth noting that the average age in 2018 is the lowest measured on the PGA Tour since 1989. Figure 2 shows a more detailed breakdown of players' ages by percentile.

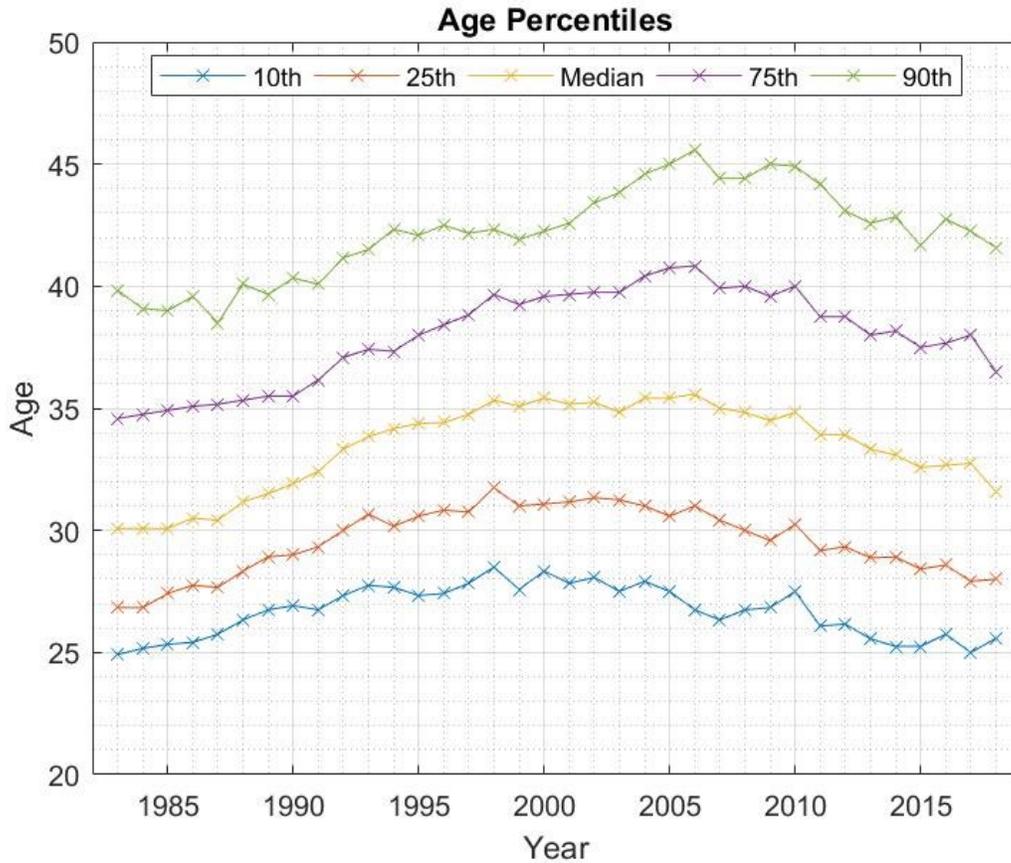


Figure 2 Age percentiles on the PGA Tour.

This shows that the distribution of ages around the median has stayed fairly consistent since 1983. The median age in 2018 was 31.6 years, 1.4 years younger than the mean age. The 10th percentile was 25.6, and the 90th percentile 41.6. This means that 80% of PGA Tour players are between the ages of 25.6 and 41.6, a range of 16 years.

2.2 European Tour

Figure 3 shows the mean age of players on the European Tour each year since 1999.

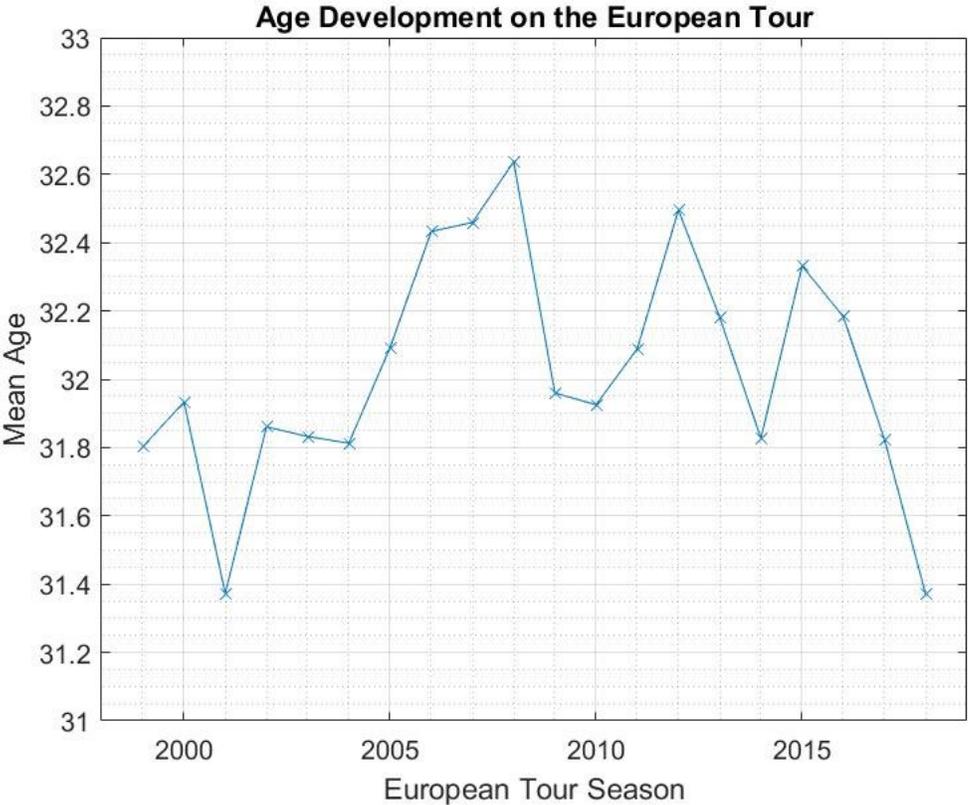


Figure 3 Mean age of players on the European Tour.

The oldest year on record was 2008, with an average player age of 32.6 recorded. This is 1.2 years older than the youngest year in 2018, with an average player age of 31.4. Figure 4 shows a more detailed breakdown of percentiles of players' ages on the European Tour.

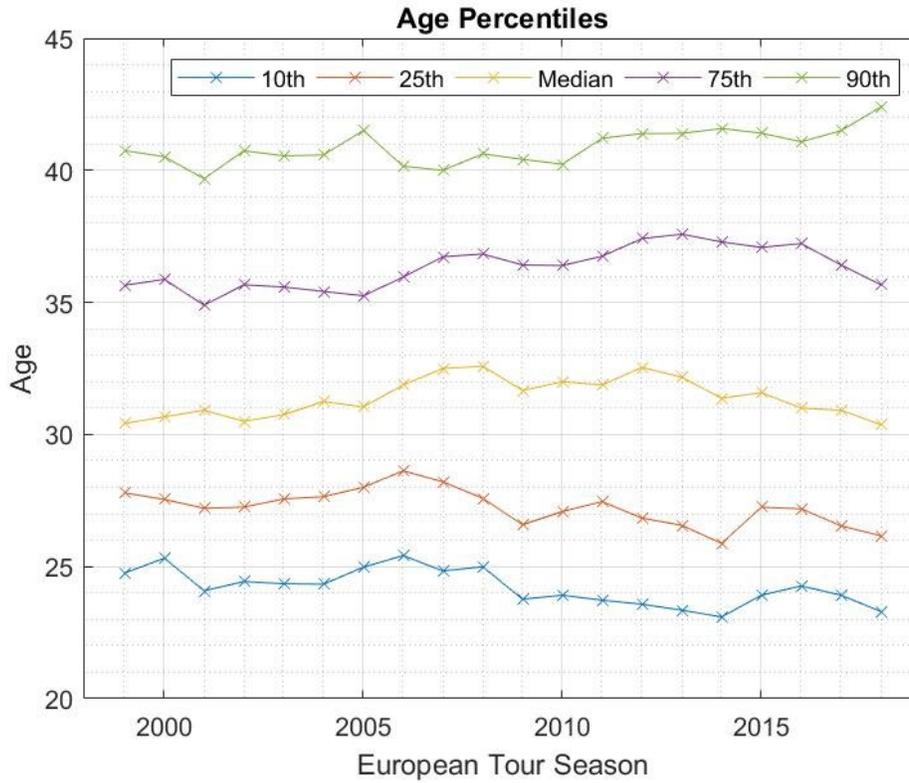


Figure 4 Age percentiles on the European Tour.

The difference between the 90th percentile and the 10th percentile in 1999 was 16 years, compared to 19.1 years in 2018. This suggests players with a wider range of ages are competing on the European Tour in 2018 than in 1999.

2.3 Web.Com Tour

Since new players joining the PGA Tour will most likely have come through the Web.com Tour, any changes in average player age on the PGA Tour may be seen earlier on the Web.com tour. Figure 5 shows the development of age on the Web.com tour since 2013.

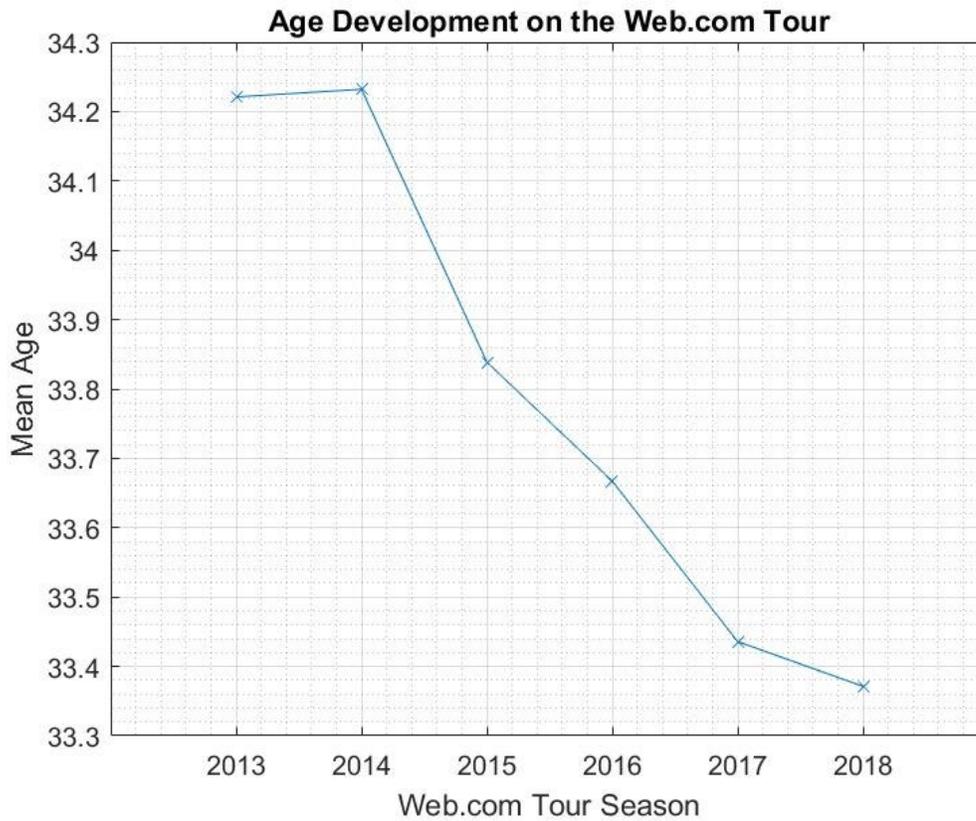


Figure 5 Mean age of players on the Web.com Tour.

We can see that the mean player age has decreased from 34.2 in 2013 to 33.4 in 2018, a decrease of 0.8 years. Figure 6 shows the age percentiles on the Web.com Tour since 2013.

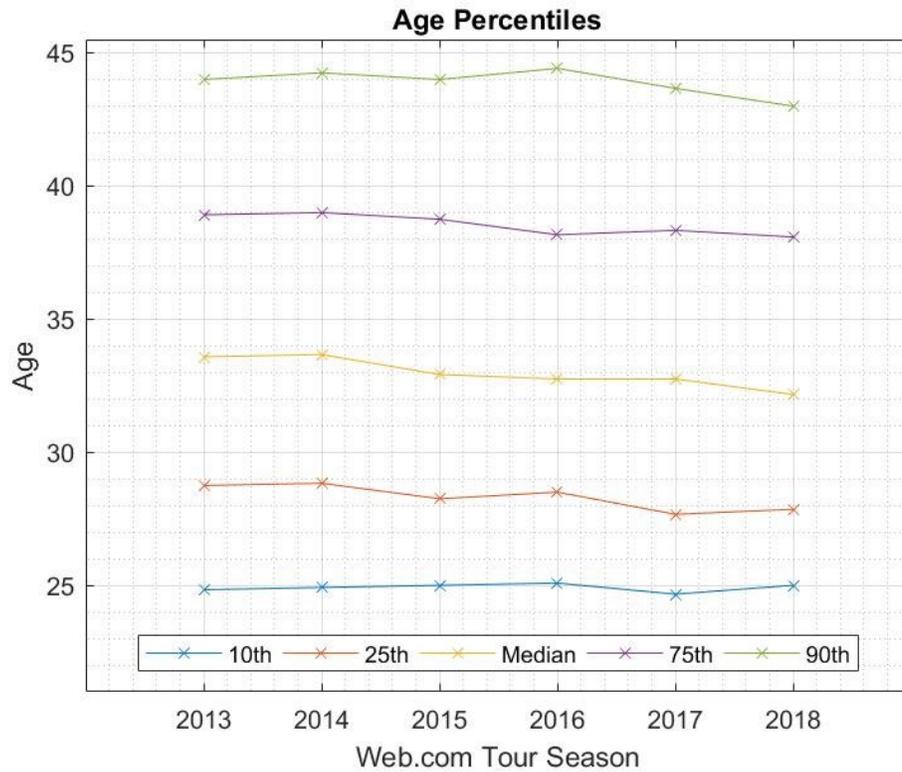


Figure 6 Age percentiles on Web.com Tour.

We can see that there has been a decrease in age for all of the above groups other than the 10th percentile, which has stayed relatively stable.

3 PGA Tour

3.1 Success

3.1.1 Event Finishes

Figure 7 shows the mean age of event winners, top 10 finishers and PGA Tour average.

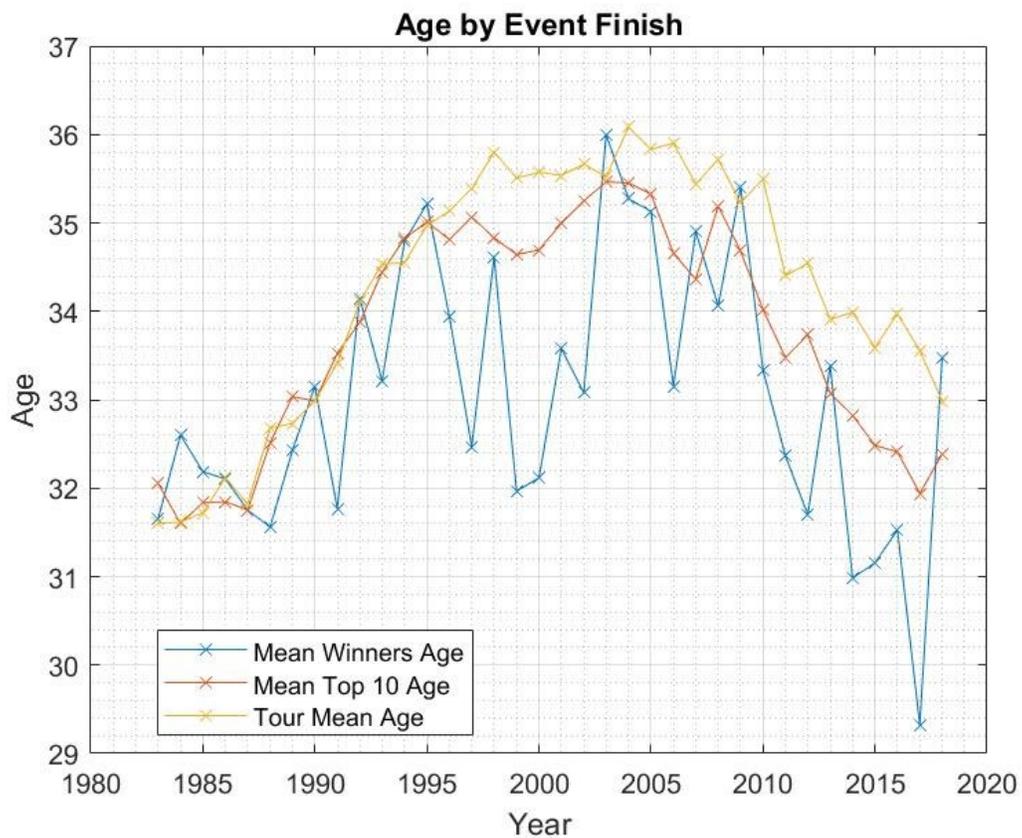


Figure 7 Age by event positions on the PGA Tour.

We can see that although there is considerable year-to-year variation in the mean age of event winners, in general they tend to be younger than the tour average. Further, since around 1996, there has been a consistent pattern between the tour average and players who finish in the top 10 in events, with the top 10 finishers around 0.5 to 1.5 years younger than the tour average each year.

3.1.2 Money

Figure 8 shows the average age of the top 5 and the top 20 on the year-end money lists against the PGA Tour average.

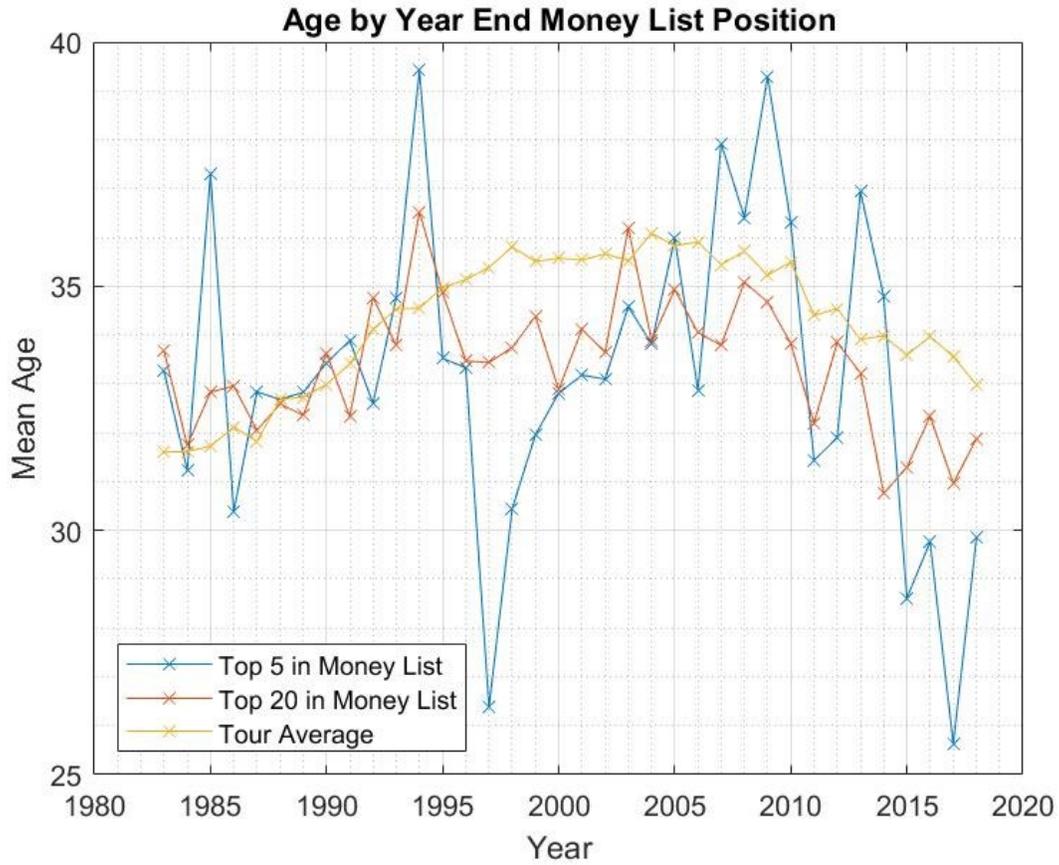


Figure 8 Mean age of players in each band of the end of season money list on the PGA Tour.

We can see that although there is considerable variation in the average age of the top 5 on the money list, the average age of the top 20 has been lower than the tour average in all but one year (2003) since 1996. Pre-1996, the age of the top 20 appears to be the same as the mean age.

3.2 Driving

Throughout this section, data is studied from 2007 onwards. This is to ensure a like-for-like comparison between the RADAR data, which was first gathered in 2007, and other statistics.

3.2.1 Driving Distance

Figure 9 shows the distribution of year-end PGA Tour driving averages since 2007 against age. Each player who is included in the end-of-year driving statistics for each year between 2007 and 2018 is included. A player can appear multiple times if they are present on more than one end-of-year statistics list. The criteria to be included within these statistics is that the player must have played in at least 40 rounds throughout the season.

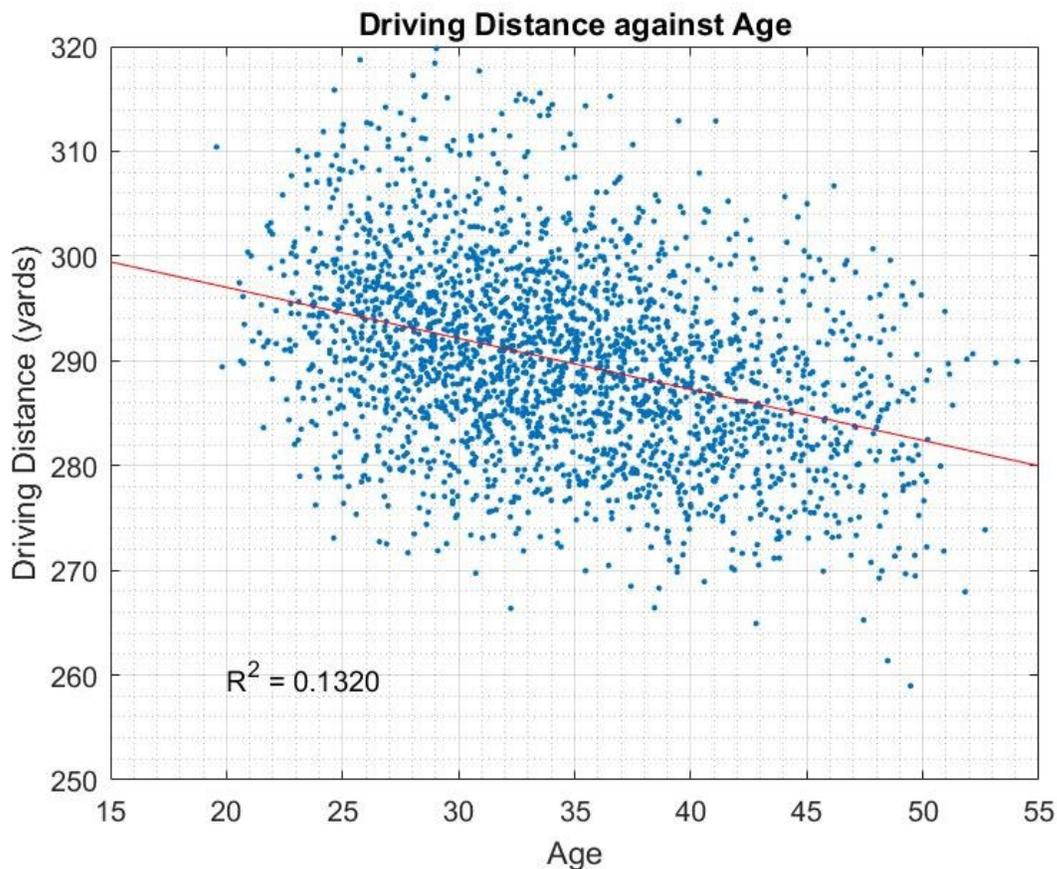


Figure 9 Driving distance against age on the PGA Tour since 2007.

This shows that there is a relationship between driving distance and age on the PGA Tour, with the fit suggesting a decrease of 0.49 yards in driving distance for every year older a player gets. However, there is considerable variation in this relationship with an R-squared of 0.1350.

3.2.2 Clubhead Speed

Figure 10 shows the relationship between age and year-end average clubhead speed on the PGA Tour since 2007, when PGA Tour RADAR data became available. The criteria for inclusion are the same as that for Figure 9.

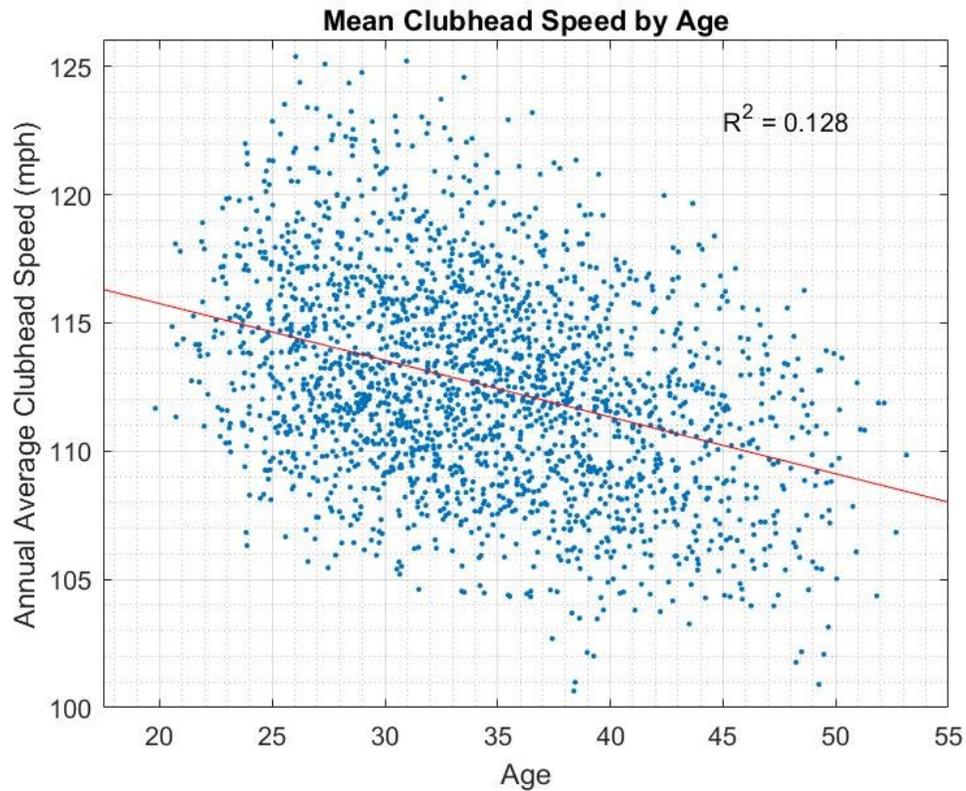


Figure 10 Year-end average clubhead speed by player age on the PGA Tour.

This trend tells us that players lose roughly 0.22MPH from their clubhead speed per year on the PGA Tour. However, we can see that there is considerable variation in the results, with an R^2 value of 0.128. Despite this, there is a clear negative correlation between clubhead speed and age. We can see that this is a similar distribution to that in Figure 9, as would be expected due to the relationship between clubhead speed and driving distance.

3.2.3 Above Below 30

Figure 11 shows the development of driving distance on the PGA Tour between 1991 and 2019 for all players and for players under 30.

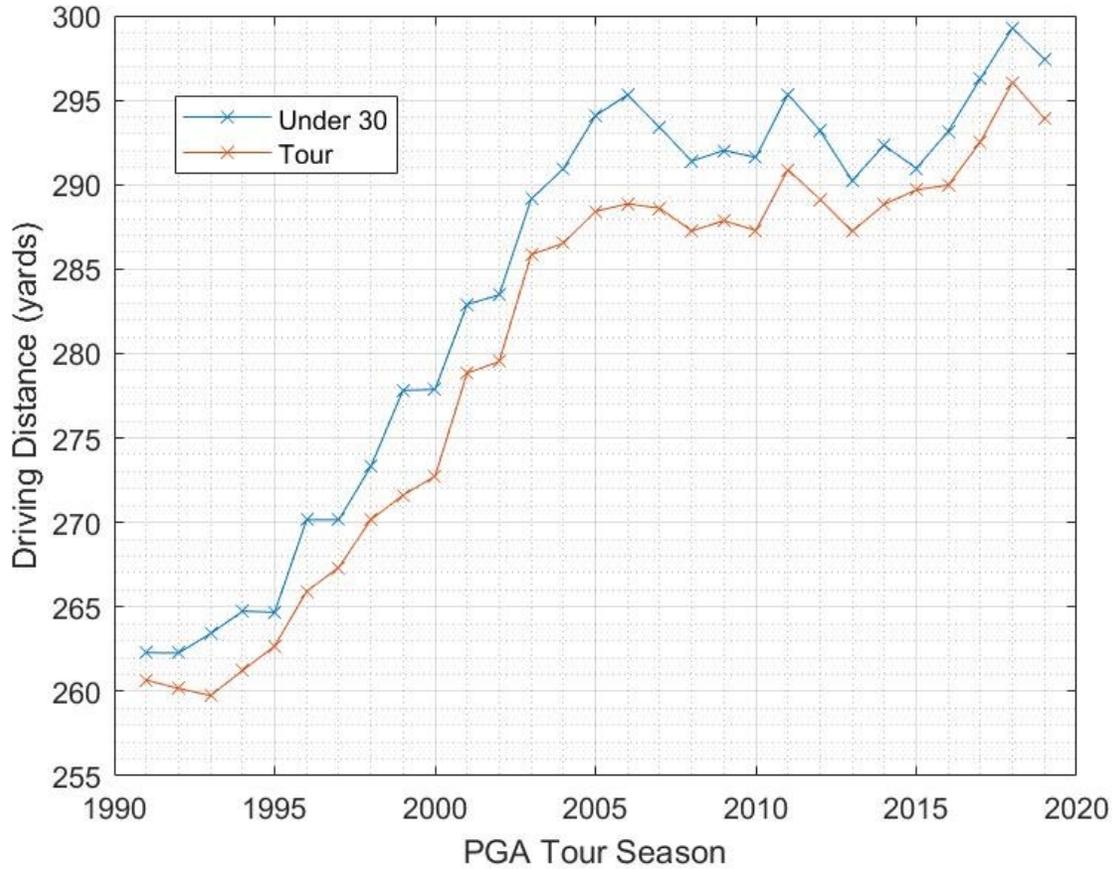


Figure 11 Development of driving distance of Tour compared to players under 30.

We can see that the difference is between 1 and 4 yards every year, with a difference of 3.5 yards in 2019. The average age of players under 30 on the PGA Tour is 26 in 2019, while the average of players in general is 32. This means that the 0.5 yards per year relationship given above is commensurate with the differences seen here.

4 European Tour

4.1 Success

4.1.1 Event Finish

Figure 12 shows the mean age of players who win events, finish in the top 10 and the European Tour average since 1999.

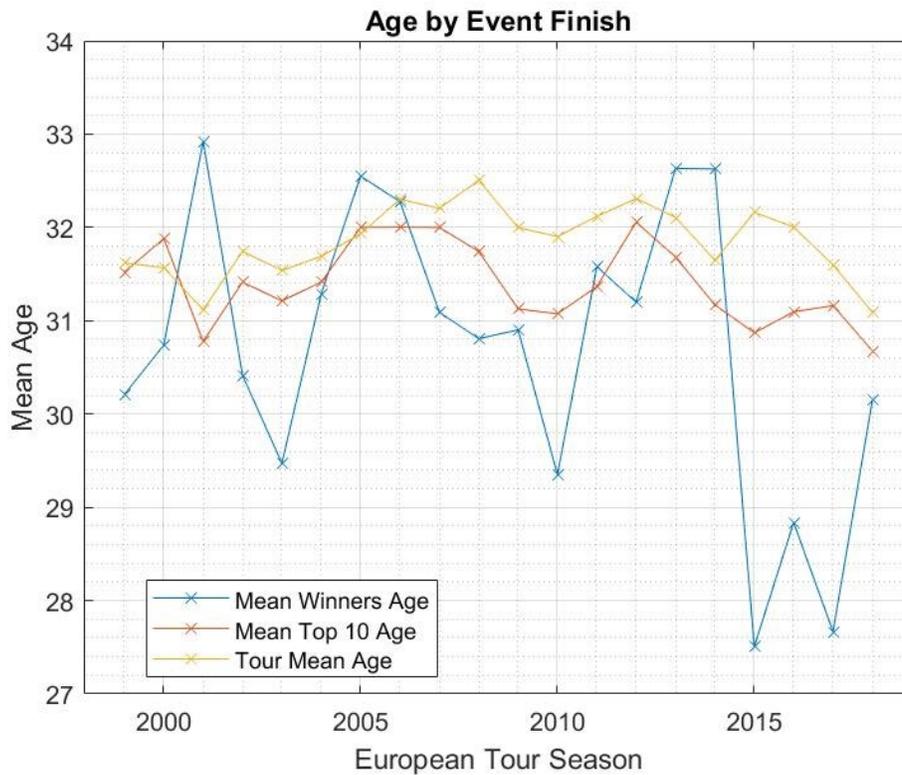


Figure 12 Mean Age by event positions on the European Tour.

Similar to the PGA Tour, the event winners' mean age on the European Tour shows a lot of variability. However, it tends to be lower than the European Tour average. Further, the mean age of players who finish in the top 10 of events is younger than the tour average by between 0 and 1 year -- every year apart from 2000 and 2005.

4.1.2 Money

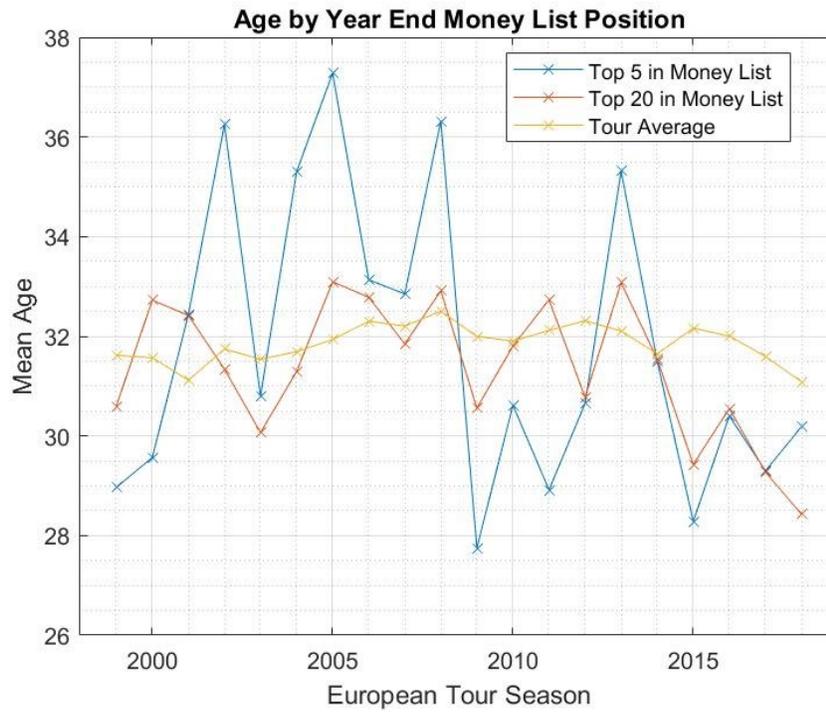


Figure 13 Mean age of players in each band of the end of season money list on the European Tour.

Once again, there is considerable variation in these values. However, since 2015 the mean age of players finishing in the top 5 and top 20 of the European Tour money list has been younger than the European Tour average.

4.2 Driving

4.2.1 Driving Distance

Figure 14 shows the relationship between European Tour seasonal driving distance averages and player age from 2007 to 2018. As was the case for the PGA Tour, a player can appear multiple times if they are present on more than one end-of-year statistics list, and a player must have played 40 rounds in the European Tour season to be included.

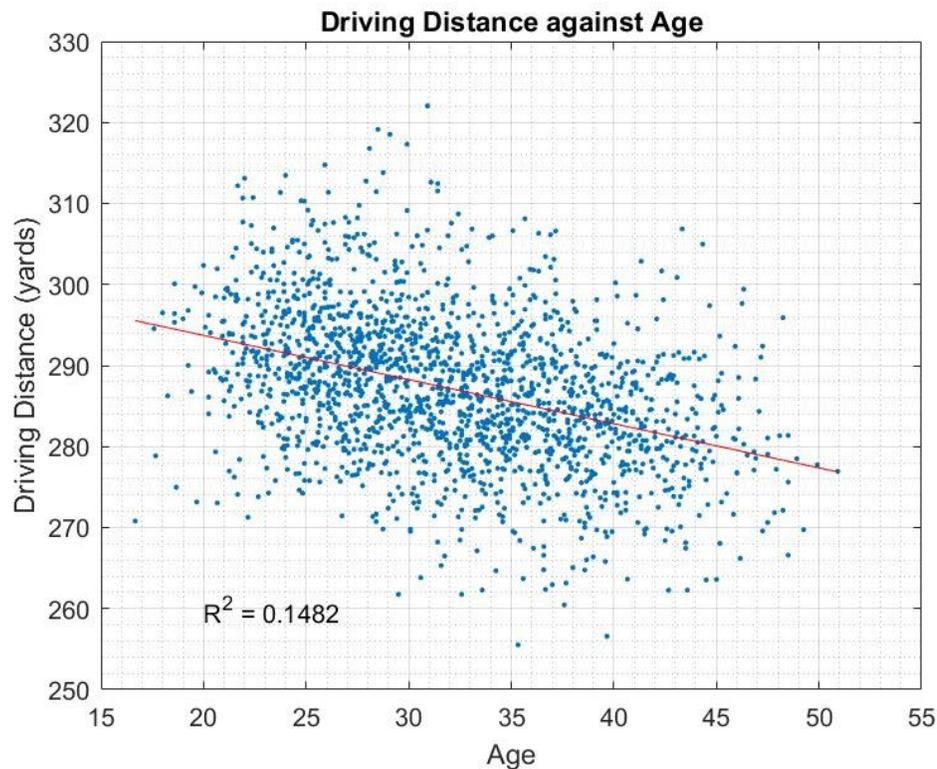


Figure 14 Driving distance against age on the European Tour since 2007.

The R^2 of this relationship is similar to that of the PGA Tour, which is 0.1320. Further, the model suggests that driving distance on the European Tour decreases 0.54 yards per year in age, compared to 0.49 yards per year on the PGA Tour.

5 Web.com Tour

5.1 Success

5.1.1 Event Finishes

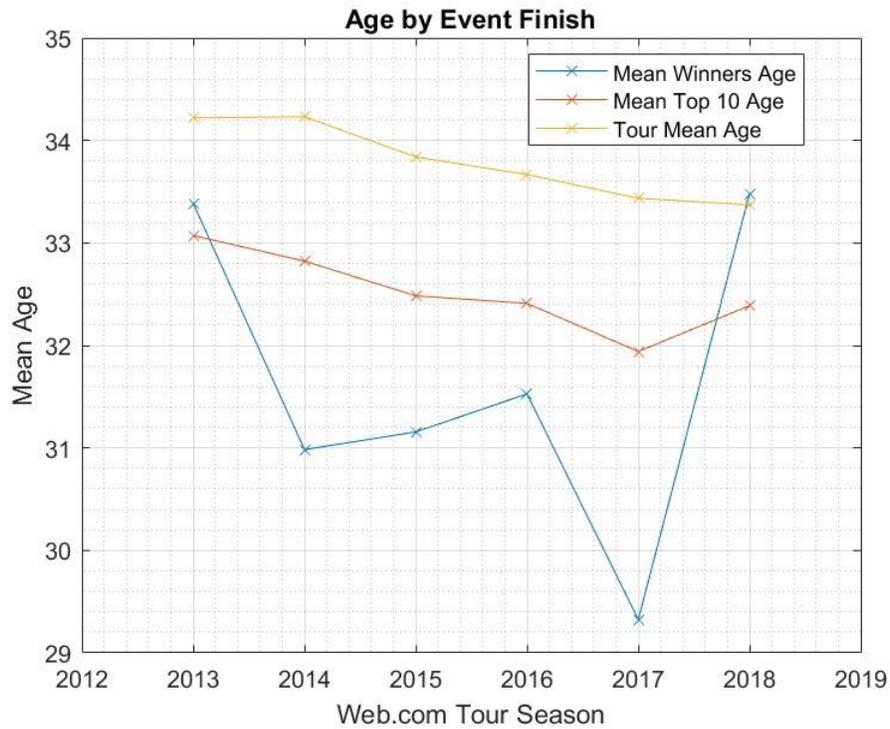


Figure 15 Mean Age by event positions on the Web.com Tour.

The mean age of players finishing in the top 10 of events is consistently younger than the Web.com Tour average by around 1 year. Web.com Tour event winners again show more variation; however they have been younger than the Web.com Tour average every year apart from 2018.

5.1.2 Money

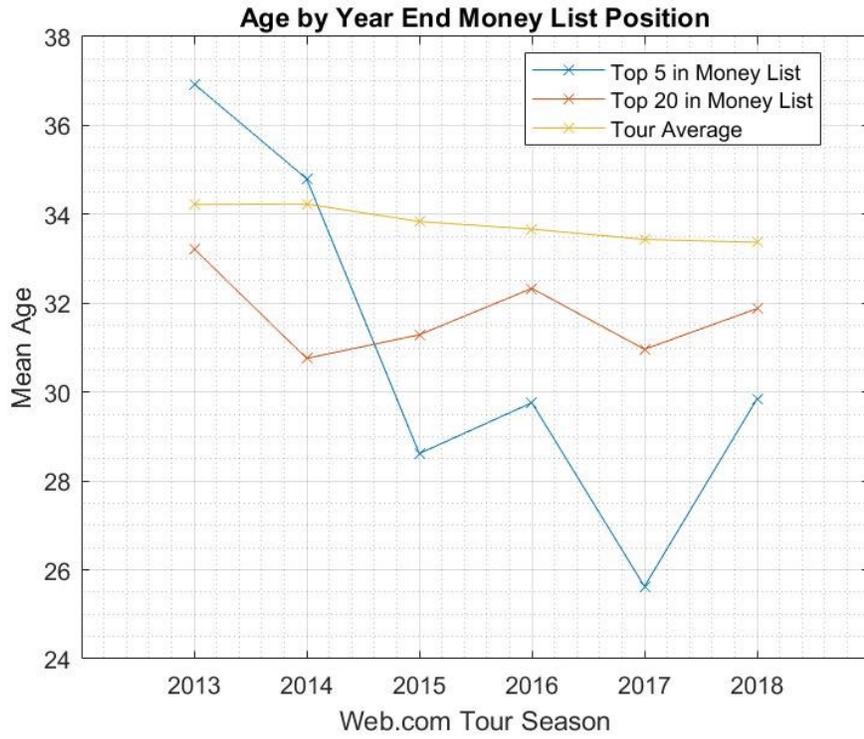


Figure 16 Mean age of players in each band of the end-of-season money list on the Web.com Tour.

The top 20 in the money list tend to be around between 0.5 and 1.5 years younger than the Web.com Tour average. Again, the top 5 show considerable variation.

5.2 Driving

5.2.1 Driving Distance

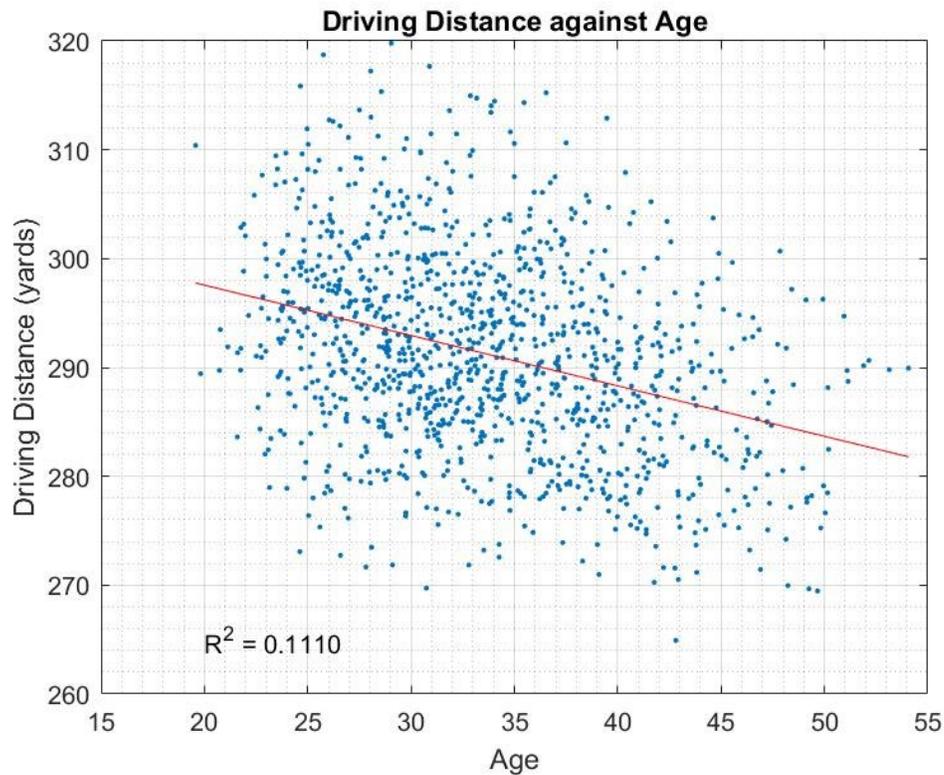


Figure 17 Driving distance against age on the Web.com Tour since 2013.

The fitted model suggests that for each year older a player is on the Web.com Tour, he will lose 0.46 yards from their average driving distance. This is comparable to the values calculated for the other tours. The R^2 is also comparable to the values calculated for the other tours.

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