#2: Marathon and Half-Marathon Finish Times

Analysis of the Nashville Marathon and Half-Marathon data set has helped to reveal many notable details about the races. Let me begin with directing your attention to the finish times. From this we’re able to see that there’s a very significant difference in time between our fastest and slowest times for both half and full marathons. This is especially true for the half marathon of 2017 and the full marathon of 2016. Even our median finish times are drastically shorter than our slowest times and are very close in proximity to our mean times. Finally, we’re shown the median and means for all 4 years combined for both half and full marathons.

#3: Marathon runners faster than Oprah Winfrey

We also looked into the amount of marathon runners who were able to beat Oprah Winfrey’s finish time (cell D15) for when she ran the Marine Corps Marathon in 1994. In cells B15 through B18, we see the count of these runners for each year and in the next column we see the percentage of the total runners who were able to beat her time for those same years. In 3 out of the 4 years, we see nearly 40% of the competing runners for that year beat her time.

#4: Half-Marathon Runners Categorized by Quartiles

In the third dataset, our finish times for half marathons for each year is broken up into quartiles. With quartiles, the data is categorized into the 25th, 50th, and 75th percentile. For example, the first value, B22, calculates the top 25% of finish times for the half marathon in 2016. Meaning all runners who got a finish time that is less than or equal to this finish time is in the top 25% of runners. The second column displays the finish time that runners must have or be under (but greater than the 25th percentile) to be in the 50th percentile and so on.

#5: Hypothesis

In examining runners finish time year-to-year, I find they got increasingly faster in half-marathons from years 2016 through 2018, but slow back down a little in 2019. For example, in 2016, the top 3 finishers had finish times of 1:11:15, 1:11:50, and 1:13:43. In 2017, the top 3 finishers had times of 1:10:58, 1:11:25, 1:11:42. In 2018, 1:09:25, 1:09:51, and 1:10:38. Lastly, in 2019 the top three times were up a bit to 1:10:03, 1:12:15, 1:12:52. 2018 was their fastest year, 2016 being their slowest year.

As far as marathons go, runner’s times were up for one year and down for the next. They started out low in 2016, higher in 2017, back down in 2018, back up a little in 2019. Even with this pattern, 2016 was their fastest year and 2017 their slowest.

#6: Differences in Marathon Winner and Second Place finish times

In our 4th dataset, we focus on the winner of the Rock and Roll Marathon and their finish times, the person who won second place and their finish times, and the difference between the two. For all four years the same person won, Scott Wietecha. For the years 2016 and 17, Scott had an enormous lead over the second-place winner. In 2018, while it was a much smaller lead than the years prior, Scott still enjoyed a comfortable lead of 1 minute and 36 seconds over his opponent. In 2019, the lead over his challenger was drastically smaller in not even being 30 seconds. Quite a dramatic change up. You can get a visual sense of Scott’s lead for each year with the column chart located to the right of our dataset.

BONUS