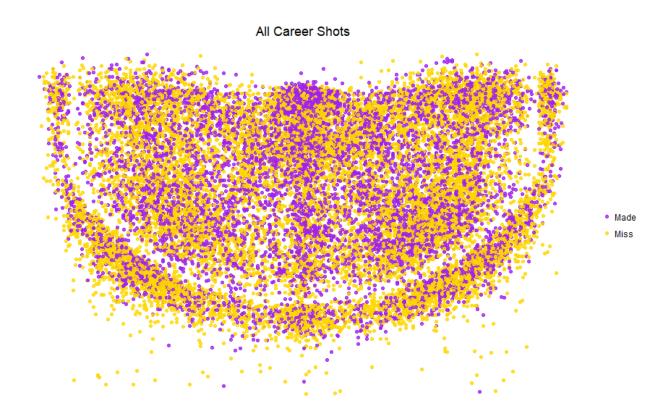
## The Legendary Career of Kobe Bryant Visualized in Data

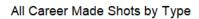
By: Drew Malter, Danny Malter

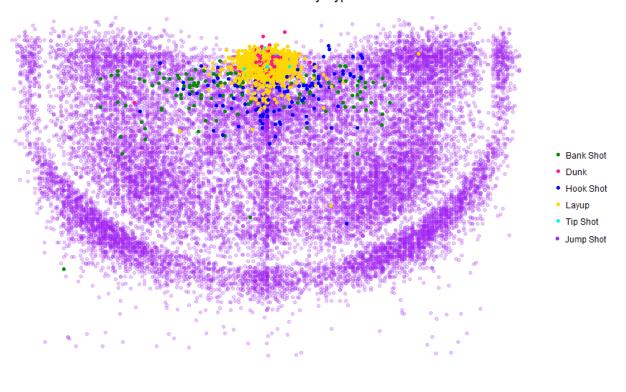
January 29, 2020

With the tragic loss of Kobe Bryant and his daughter Gianna, we reflect on his dominant career with the Lakers by showcasing his remarkable 20 seasons in the NBA. Using the ggplot2 library in R and leveraging data from <a href="Kaggle's Kobe Bryant Shot Selection">Kaggle's Kobe Bryant Shot Selection</a> competition, we've created several data visualizations that display his achievements.

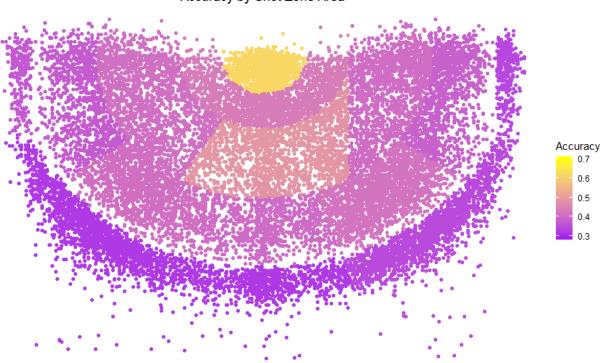
Below is a shot chart containing all 30,699 shots that he took from 1996-2016, separating his makes from his misses. There's essentially nowhere on the court that Kobe couldn't score from, but he especially excelled with his mid-range jumpers from the shoulders and baseline. Further below you'll see similar shot charts broken down by type of made shot and average accuracy among different regions on the court.



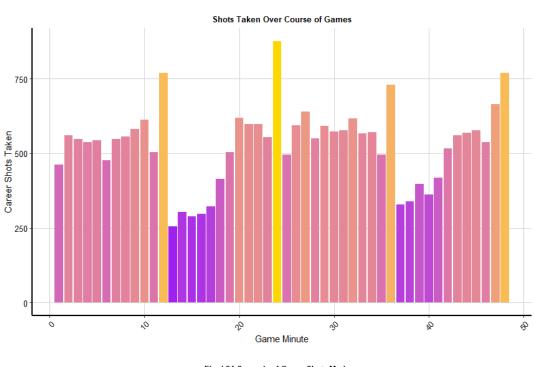


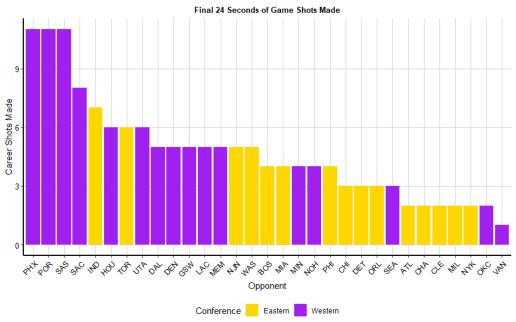


## Accuracy by Shot Zone Area

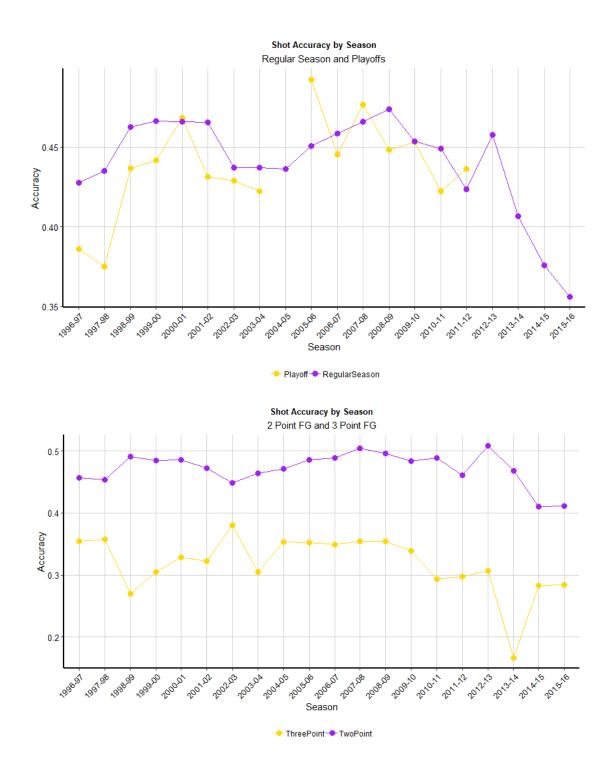


When looking at the frequency of the Mamba's shooting over the course of the game, it's apparent that the superstar wants the ball as the clock approaches zero. The four tall spikes represent the final minute of each quarter. Kobe often got his rest in the first 4-6 minutes of the 2<sup>nd</sup> and 4<sup>th</sup> quarters, accounting for the dips on those regions of the chart. Among his game-ending shots taken, the 2<sup>nd</sup> chart on this page shows which teams suffered the most final second daggers from Kobe. Amazingly, every team from his era fell victim at least twice (Vancouver became Memphis in 2001).

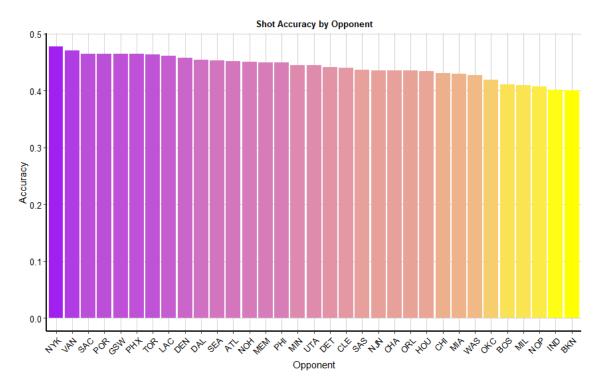


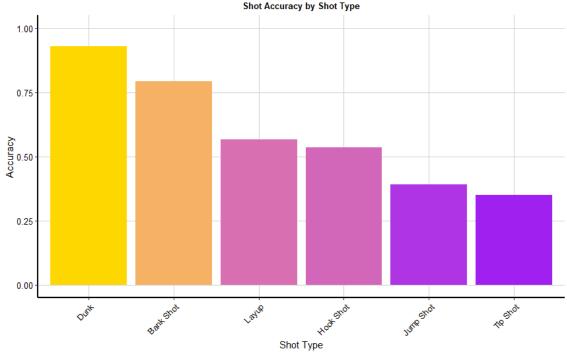


Next, we're looking at the trend of Bryant's shot accuracy over the course of his career. Early in his career, he struggled to maintain the same success in the playoffs that he had in the regular season, but that eventually changed as he made his way to his 5 championships. The most impressive part of these charts, however, is that 17 seasons into his career he was shooting as well as he ever had been.

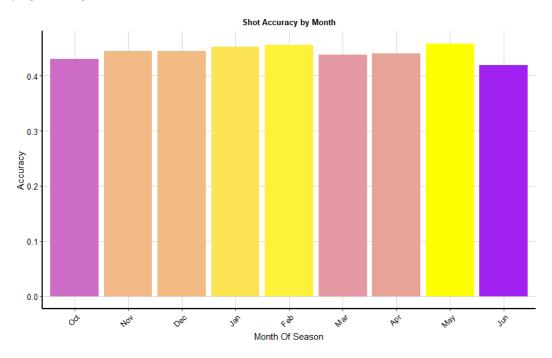


The below two charts compliment what we've seen so far but are broken down by opponent and shot type. Most of his better numbers came from Western conference teams, perhaps due to less travel, but also likely due to his competitive nature of wanting to dominate his rivals. However, among all the Eastern conference teams, Kobe always played his best in the spotlight against New York. When it comes to shot type, his smooth touch resulted in a successful bank shot more than three quarters of the time!

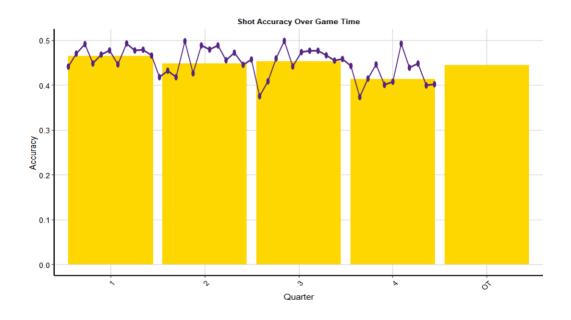




The below chart shows the impressive constant shot improvement from Kobe over the course of the season. Like most NBA players, he does show a slight decline late in the season as the fatigue from his 'always give 100%' mentality eventually kicks in. He also consistently was near the top of the league in games and minutes played. However, when the playoffs enter the picture, Kobe has historically put his fatigue aside and outperformed his regular-season-self. The June decline can likely be attributed to only playing the league's best defenders in the NBA finals.

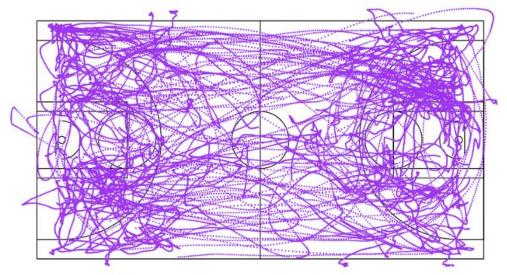


When looking at his success distributed over the course of the game, the results are similar in a few ways. Kobe remains consistent and does show a predictable slight dip in the 4<sup>th</sup> quarter but is able to rejuvenate himself for overtime.



Finally, Kobe Bryant is perhaps best known for always being the hardest worker on the court. Despite his shooting numbers declining late in his career, his effort on the court remained elite. In a 2015 game against the Wizards, a 37-year-old-Kobe was keeping up with young stars by moving 2.73 miles in his 36 minutes of time on the court. With or without the ball, Kobe's constant movement made him nearly impossible to guard, even in his final season.

Kobe's In-Game Movement - 12/2/2015 Lakers @ Wizards



Lakers @ Wizards 12/2/2015

	Total Distance
Player	in Game (ft)
Basketball	29,530
Clarkson	15,890
Gortat	15,499
Beal	15,235
Wall	14,652
Bryant	14,430
Hibbert	13,690
Randle	13,280
Porter	13,089
Dudley	12,829

