FLIP00 Final Assessment

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Defn

Kobe Bryant marked his retirement from the NBA by scoring 60 points in his final game as a Los Angeles Laker on Wednesday, April 12, 2016. Drafted into the NBA at the age of 17, Kobe earned the sport's highest accolades throughout his long career. Using 20 years of data on Kobe's swishes and misses, can you predict which shots will find the bottom of the net? This competition is well suited for practicing classification basics, feature engineering, and time series analysis. Practice got Kobe an eight-figure contract and 5 championship rings. What will you get from it?

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- Step One - Check the data ,Data cleaning,Data process
- Step Two - Data visualization
- Step Three - Build the model and select the optimal parameters
- Step Three - Visualization parameters and process the test data

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- First,let's check the data.

(30697, 25)

Out[4]:

	action_type	combined_shot_type	game_event_id	game_id	lat	loc_x	loc_y	lon	minutes_remaining	period	...	shot_type	shot_zone_area	sho
0	Jump Shot	Jump Shot	10	20000012	33.9723	167	72	-118.1028	10	1	...	2PT Field Goal	Right Side(R)	
1	Jump Shot	Jump Shot	12	20000012	34.0443	-157	0	-118.4268	10	1	...	2PT Field Goal	Left Side(L)	
2	Jump Shot	Jump Shot	35	20000012	33.9093	-101	135	-118.3708	7	1	...	2PT Field Goal	Left Side Center (LC)	
3	Jump Shot	Jump Shot	43	20000012	33.8693	138	175	-118.1318	6	1	...	2PT Field Goal	Right Side Center(RC)	
4	Driving Dunk Shot	Dunk	155	20000012	34.0443	0	0	-118.2698	6	2	...	2PT Field Goal	Center(C)	R

5 rows × 25 columns

https://blog.csdn.net/weixin_43746433

- There must be variables in so much data that have nothing to do with our model, and we will remove them in some way.

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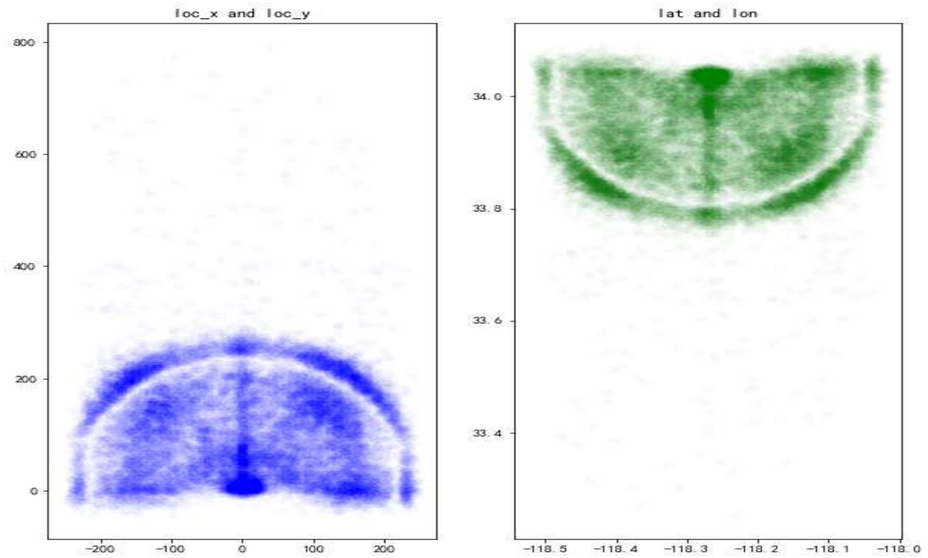
- After we delete blank data,we create charts to check the relationship between variable.



- We can make sure that the shooting position and latitude and longitude are basically consistent with the court.

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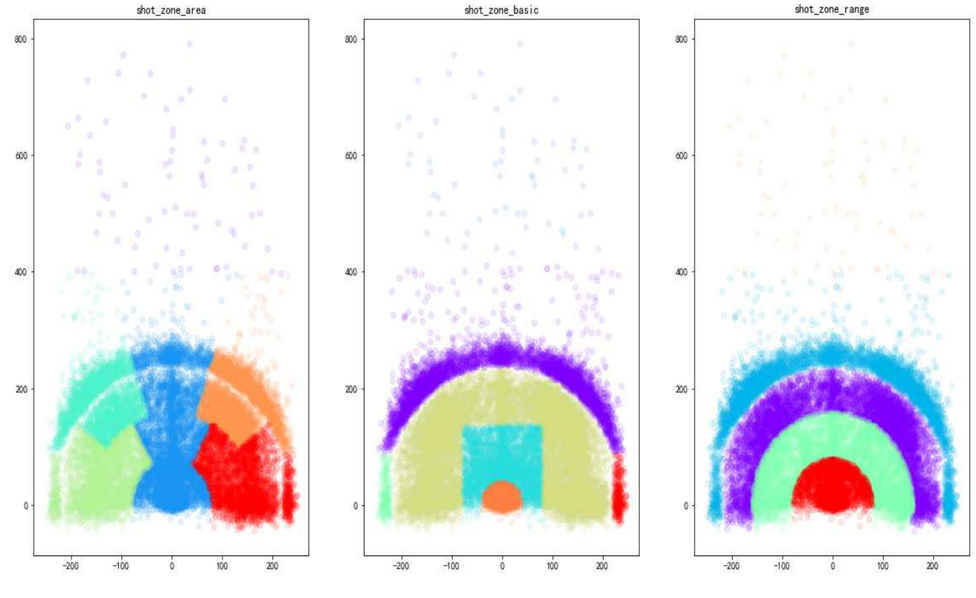

- The shotzone also has the same characteristic whth the lat and lon.

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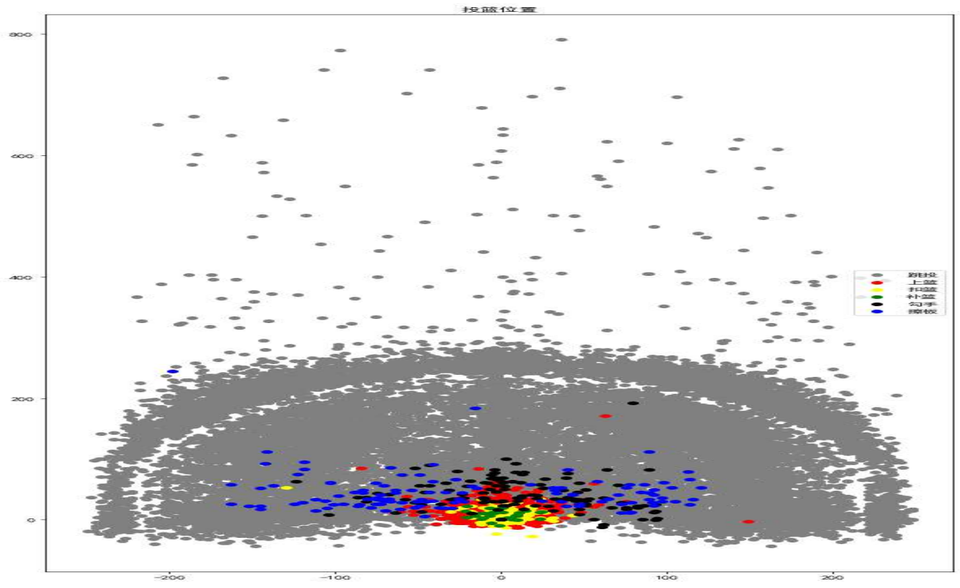

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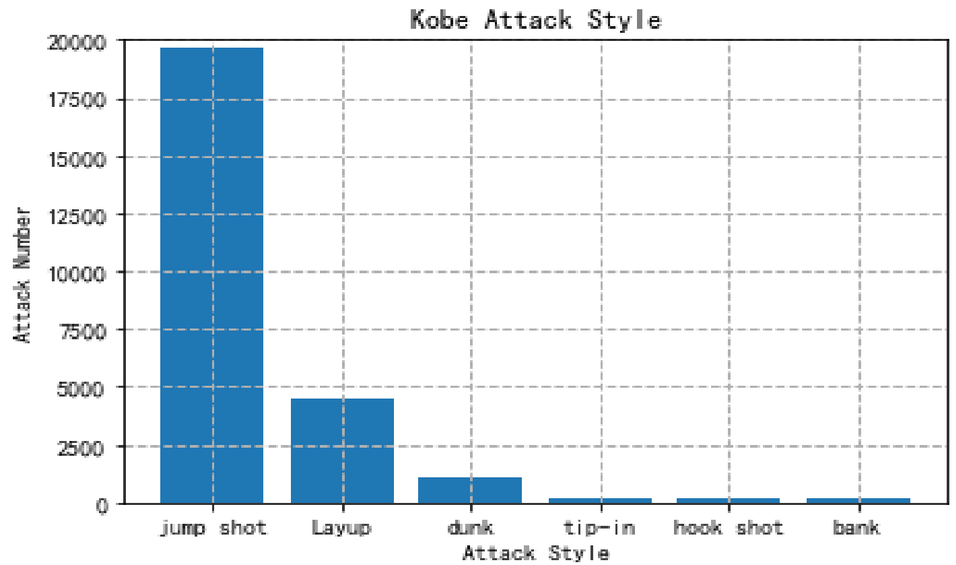

- Kobe's way of shooting, it is clear that the most jump shot.

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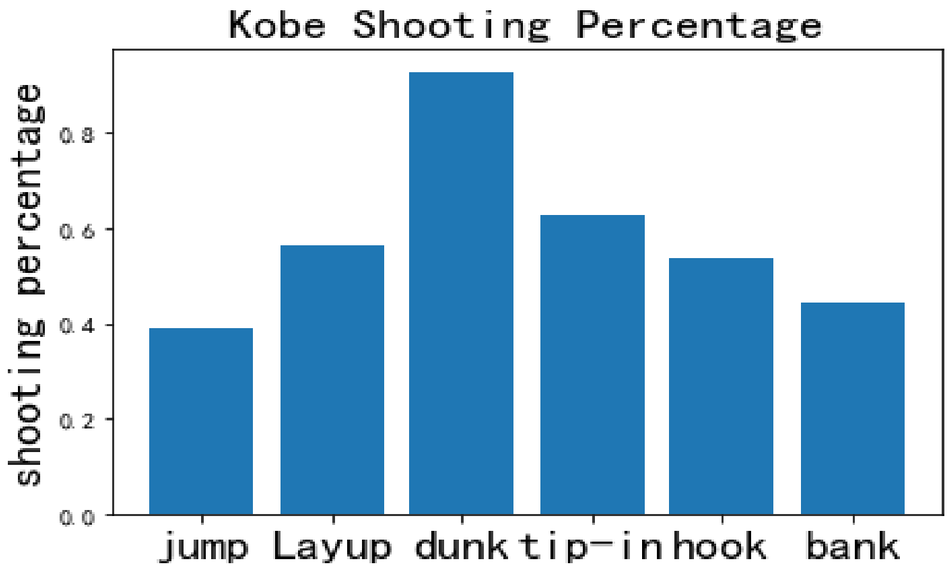

- On the shooting percentage, the dunk is undoubtedly the highest.

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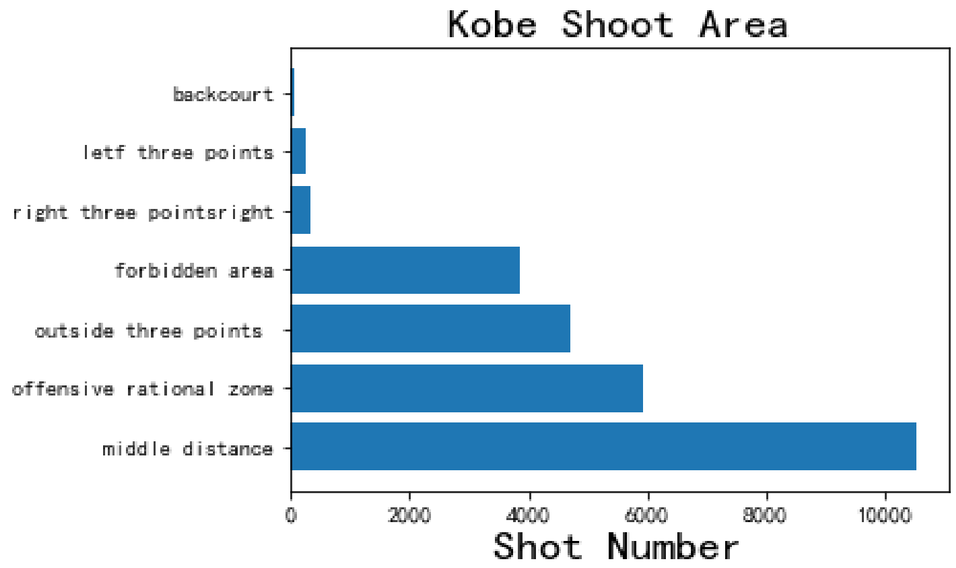

- From the shooting distance, most of Kobe is in the middle distance.

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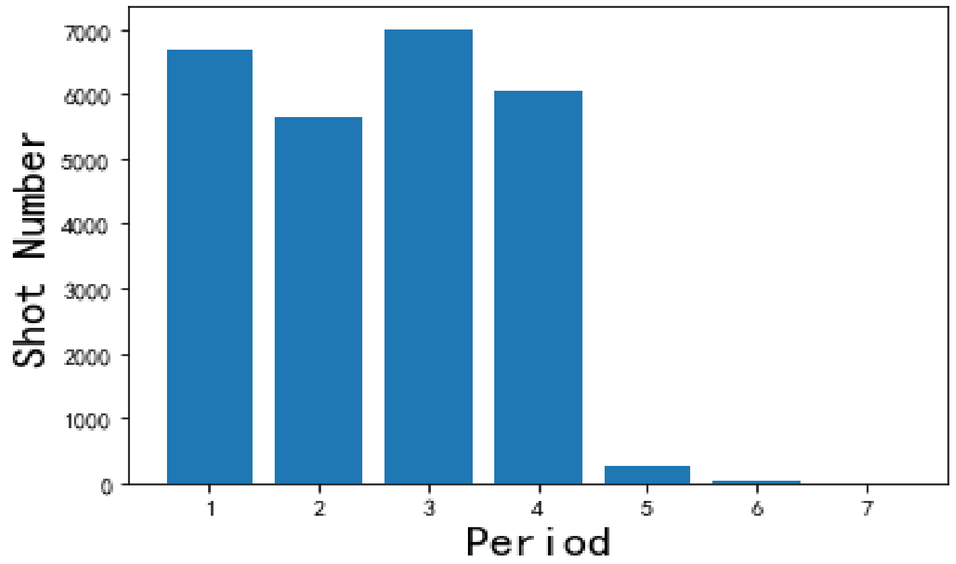

- Kobe's shooting times in each quarter are the most in the third quarter and the second in the first quarter.
- Because the 5, 6 and 7 quarters are overtime games, naturally much less.

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- The shooting percentage of each section can be seen that Kobe's shooting percentage is the lowest in the fourth quarter.
- It can be seen that physical strength has some influence on Kobe's shooting percentage.

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- We need to eliminate duplicate data before we build models.
- Encoded the data by one-hot.
- Choose the minimum value of loss and the number of optimal trees, the optimal value of maximum depth.

Build and train the model and produce the submission data

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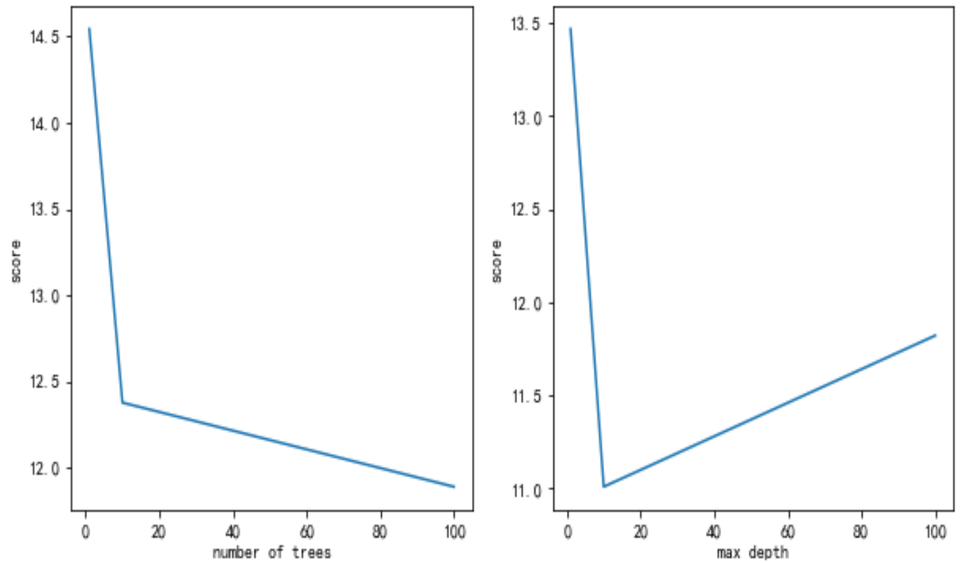

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Thanks For Your Listening

Made by MC

QingDao technological university