



Web Scraping Project (Group 7)

Hong Kong Jockey Club Horse Racing Analysis

Dicky, Eddy, and Oillio, Sep 2020

Aims

Beat Hong Kong Jockey Club by using their Racing Data

Business values

Of Course, Win Money !



Scraping Data for Jockeys and Trainers

Racing Info (Local) | Racing Info (Simulcast) | Racing Info (Conghua Exhibition Racing) | Racing News | Key Races | Multimedia Show
 International Racing | Hong Kong International Sale | Conghua Racecourse | Betting Guide | Learn Racing

Entries Race Card Current Odds Trainers' Entries Jockeys' Rides Reference Info Statistics Results Report Jockeys & Trainers Horses Fixtures

Racing Information (Local) - Jockeys & Trainers - Trainers

Previous Season Up to Race Meeting of 15/07/2020 (Overseas records not included)

Current Season

View in Percentage							
Trainer	Win	2nd	3rd	4th	5th	Total Runs	Stakes Won
P F Yiu	67	43	44	44	45	480	\$76,092,793
A S Cruz	65	55	62	44	66	600	\$127,705,341
K W Lui	63	50	52	32	59	487	\$101,536,068
J Moore	57	55	63	54	36	566	\$115,408,686
C Fownes	49	54	41	51	45	527	\$78,621,958
J Size	46	73	51	49	45	542	\$117,372,145
C S Shum	45	49	26	39	43	475	\$69,711,815
F C Lor	44	42	55	55	43	500	\$79,179,208
D J Whyte	44	41	38	47	40	466	\$51,039,432
K H Ting	35	20	25	36	27	412	\$36,788,993
Y S Tsui	33	47	44	37	37	598	\$44,017,535
K L Man	31	44	33	33	32	410	\$43,374,438
W Y So	31	28	33	33	28	426	\$35,330,615
P O'Sullivan	31	27	30	27	42	376	\$33,010,792
D J Hall	31	21	35	40	30	393	\$37,040,533
A T Millard	30	28	33	23	25	346	\$37,234,605
C H Yip	26	19	42	34	33	554	\$26,783,461
T P Yung	24	27	27	24	31	432	\$28,617,620

Racing Info (Local) | Racing Info (Simulcast) | Racing Info (Conghua Exhibition Racing) | Racing News | Key Races | Multimedia Show
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Entries Race Card Current Odds Trainers' Entries Jockeys' Rides Reference Info Statistics Results Report Jockeys & Trainers Horses Fixtures

Racing Information (Local) - Jockeys & Trainers - Jockeys

Previous Season Up to Race Meeting of 15/07/2020 (Overseas records not included)

Current Season

View in Percentage							
Jockey	Win	2nd	3rd	4th	5th	Total Rides	Stakes Won
Z Purton	147	101	100	56	66	707	\$202,112,646
J Moreira	138	123	91	68	66	719	\$206,911,366
K Teetan	93	75	81	81	72	719	\$138,503,489
C Y Ho	67	60	58	62	71	623	\$126,366,677
C Schofield	43	40	40	41	48	491	\$54,304,475
G van Niekerk	37	44	40	40	30	350	\$56,048,185
M F Poon	29	23	36	47	50	555	\$39,061,505
K C Leung	29	21	36	50	54	562	\$37,146,565
N Callan	26	40	40	58	44	481	\$42,185,220
A Badel	26	23	21	23	16	254	\$33,166,408
M Chadwick	24	41	42	33	44	510	\$48,535,923
K H Chan	22	20	28	25	18	312	\$28,282,138
A Hamelin	17	17	16	24	24	227	\$21,594,370
V Borges	16	18	17	16	21	242	\$21,600,335
B Shinn	15	43	38	34	36	445	\$38,044,770
S de Sousa	14	13	12	15	17	149	\$18,063,749
H T Mo	12	18	12	12	21	350	\$16,507,705
C Wong	9	7	8	14	6	190	\$9,261,815

Getting Horse and Race Data

RACE 1 (1)

Class 5 - 1600M - (40-0)
MOUNT BUTLER HANDICAP
HK\$ 725,000

Going : GOOD
Course : TURF - "B" Course
Time : (24.80) (48.15) (1:11.83) (1:35.48)
Sectional Time : 24.80 23.35 23.68 23.65

Multi Angle Race Replay Pass Through Analysis Aerial Virtual Replay

Plc.	Horse No.	Horse	Jockey	Trainer	Actual Wt.	Declar. Wt.	Draw	LBW	Running Position	Finish Time	Win Odds
1	3	GOOD RUNNERS WAY(C127)	Z Purton	C S Shum	131	1072	6	-	3 3 2 1	1:35.48	2.2
2	4	REGENCY GEM(C035)	J Moreira	W Y So	129	1179	7	SH	9 8 8 2	1:35.50	4.9
3	7	PROUD SKY(V406)	K Teetan	L Ho	121	1053	4	1/2	5 4 3 3	1:35.57	18
4	2	LE PANACHE(V369)	A Sanna	D J Whyte	132	1076	3	1-1/4	4 6 6 4	1:35.68	5.7
5	1	GOLD VELVET(V400)	L Hewitson	A T Millard	133	1155	8	1-1/2	8 7 7 5	1:35.71	7
6	9	ROMANTIC JOURNEY(B107)	H T Mo	C W Chang	112	1085	1	1-3/4	1 1 1 6	1:35.77	19
7	5	WICKER(B425)	N Callan	R Gibson	126	1118	9	2	7 9 9 7	1:35.79	50
8	6	WHAMPOA STAR(B146)	M F Poon	Y S Tsui	119	1139	5	7-1/2	2 2 4 8	1:36.67	14
9	8	YOUNG GLORY(B292)	M Chadwick	D E Ferraris	120	1207	2	10-1/2	6 5 5 9	1:37.15	21

Note: Special incidents index

Dividend

Pool	Winning Combination	Dividend (HK\$)
WIN	3	22.00
PLACE	3	11.00
	4	18.50
	7	38.00
QUINELLA	3,4	52.50
QUINELLA PLACE	3,4	23.00
	3,7	55.00
	4,7	129.00
3 PICK 1 (COMPOSITE WIN)	A1	15.50
	A2	NOT WIN
	A3	NOT WIN
	Detail	
TIERCE	3,4,7	702.00
TRIO	3,4,7	210.00
FIRST 4	2,3,4,7	195.00
QUARTET	3,4,7,2	3,065.00

Racing Running Position Photos

[Comments on Running](#)

Racing Information (Local) - Horses

Search Horse																									
<input type="radio"/> Horse Name: <input type="text"/> <input checked="" type="radio"/> Brand Number: <input type="text"/> <input type="button" value="Search"/>																									
Search Horse by Owner																									
<input checked="" type="radio"/> Owner: <input type="text"/> <input type="button" value="Search"/>																									
Search Horse by Sire																									
<input checked="" type="radio"/> Sire: <input type="text"/> <input type="button" value="Search"/>																									
Horse Index																									
A B C D E F G H I J K L M N O P Q R S T U V W X Y Z																									
List By Trainer																									
Trainers in Service																									
<table border="1"> <tr><td>C W Chang</td><td>A S Cruz</td><td>D E Ferraris</td><td>C Fownes</td><td>R Gibson</td></tr> <tr><td>D J Hall</td><td>D A Hayes</td><td>L Ho</td><td>F C Lor</td><td>K W Lui</td></tr> <tr><td>K L Man</td><td>A T Millard</td><td>P O'Sullivan</td><td>C S Shum</td><td>J Size</td></tr> <tr><td>W Y So</td><td>K H Ting</td><td>Y S Tsui</td><td>D J Whyte</td><td>C H Yip</td></tr> <tr><td>P F Yiu</td><td>T P Yung</td><td></td><td></td><td></td></tr> </table>	C W Chang	A S Cruz	D E Ferraris	C Fownes	R Gibson	D J Hall	D A Hayes	L Ho	F C Lor	K W Lui	K L Man	A T Millard	P O'Sullivan	C S Shum	J Size	W Y So	K H Ting	Y S Tsui	D J Whyte	C H Yip	P F Yiu	T P Yung			
C W Chang	A S Cruz	D E Ferraris	C Fownes	R Gibson																					
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[Entries](#) [Race Card](#) [Current Odds](#) [Trainers' Entries](#) [Jockeys' Rides](#) [Reference Info](#) [Statistics](#) [Results](#) [Report](#) [Jockey](#)

Racing Information (Local) - Horses

GOOD RUNNERS WAY (C127)	Country of Origin / Age : NZ / 6	Trainer :
	Colour / Sex : Bay / Gelding	Owner :
	Import Type : PPG	
	Season Stakes* : \$0	Current Rate :
	Total Stakes* : \$1,388,520	Start of Season Rate :
	No. of 1-2-3-Starts* : 2-1-2-22	Season Rate :
	No. of starts in past 10 race meetings : 0	Sire :
	Current Stable Location (Arrival Date) : Conghua (04/03/2020)	Dam :
		Dam's Sire :
		Same Sire :



- [Form Records](#)
- [Rating/Wt/Placing](#)
- [Performance by Distance](#)
- [Trackwork Records](#)
- [Veterinary Records](#)
- [Movement Records](#)
- [Pedigree](#)
- [Other Horses](#)

Summary

4 Data Types:



10207
Race results



1417
Horses



50
Jockeys

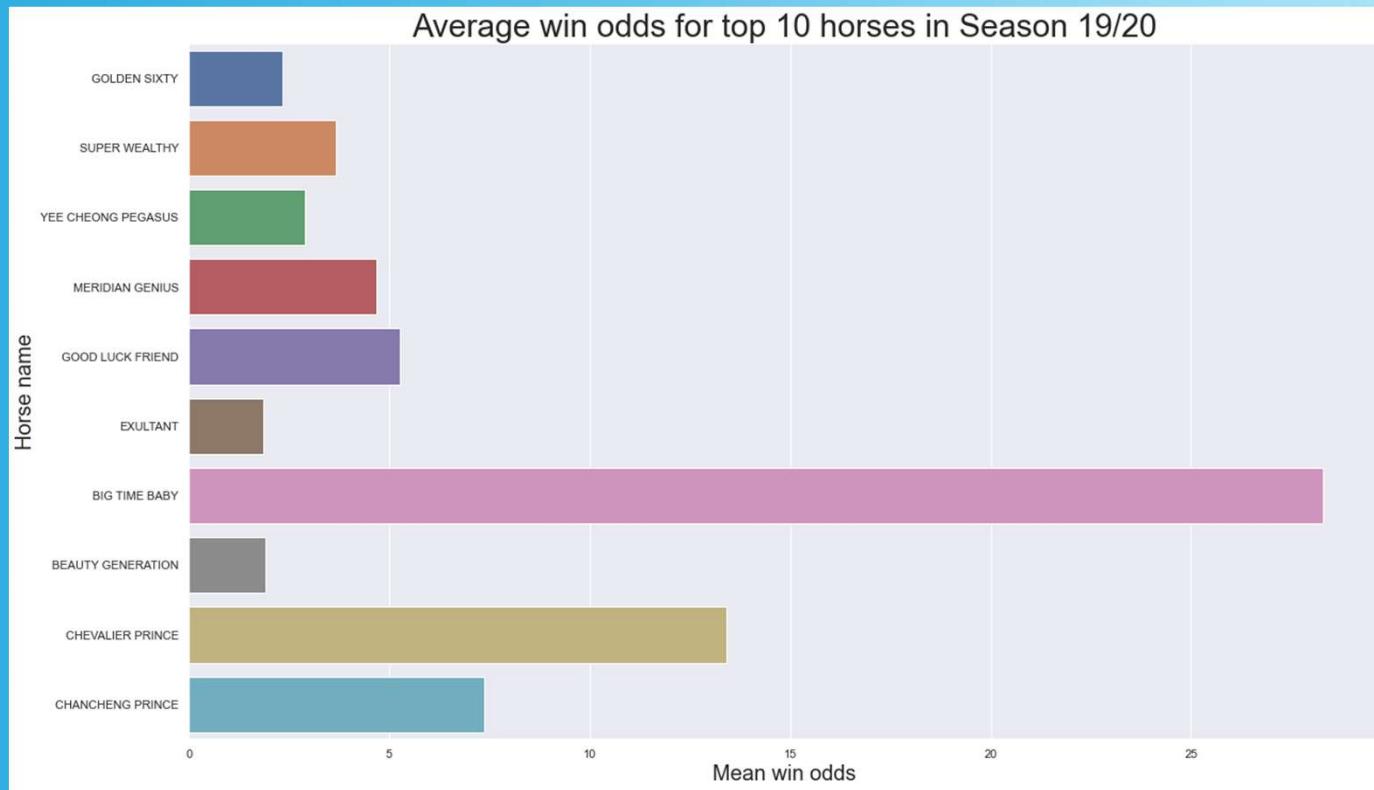


40
Trainers



Do you know there is.....
Total 828 races in 19/20
Total 93.2 Billion HKD
bet amount !!!!!

Average win odds for top 10 horses

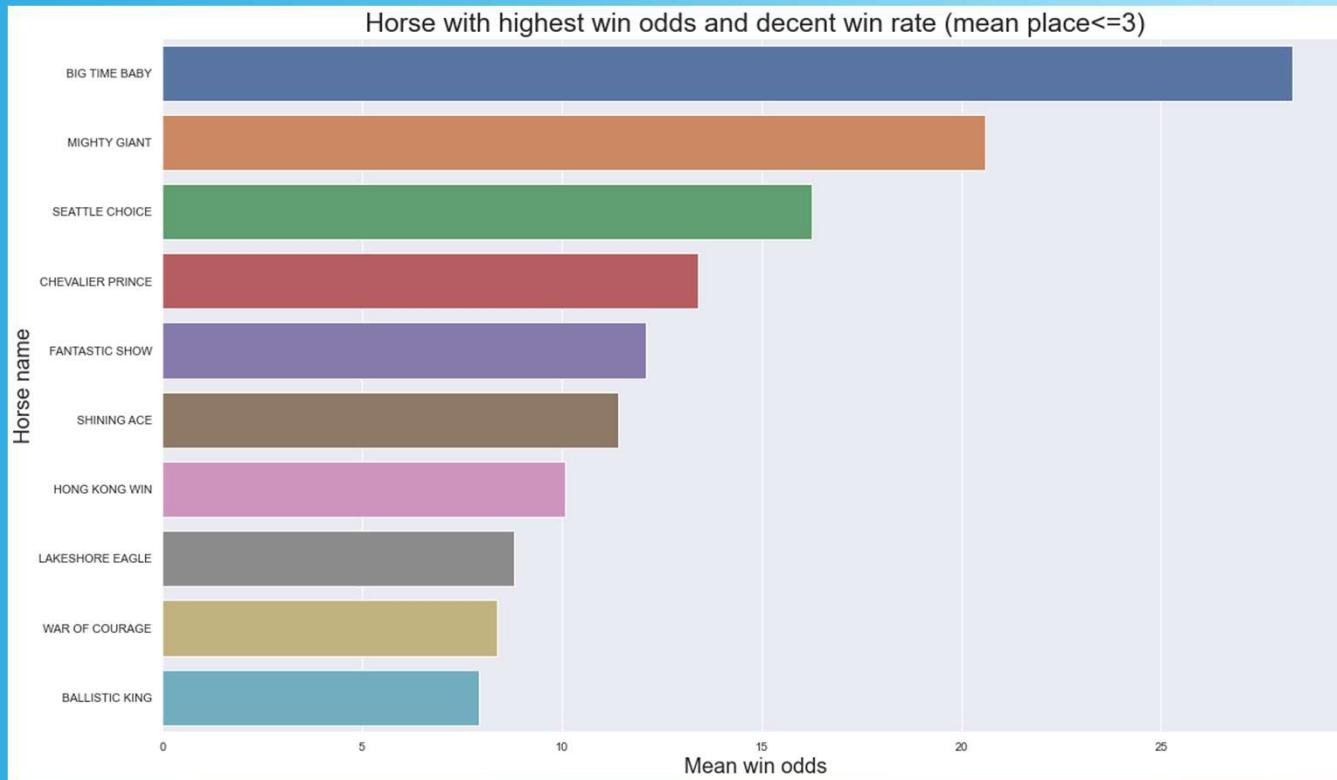


horse_id	horse	win_odds	place	num_of_race
664	C238	GOLDEN SIXTY	2.328571	1.000000
1034	D108	SUPER WEALTHY	3.675000	1.250000
201	B064	YEE CHEONG PEGASUS	2.900000	1.571429
527	C067	MERIDIAN GENIUS	4.680000	1.600000
1142	D228	GOOD LUCK FRIEND	5.266667	1.666667
225	B101	EXULTANT	1.871429	1.714286
56	A157	BIG TIME BABY	28.285714	1.857143
1401	V380	BEAUTY GENERATION	1.925000	2.000000
1199	D298	CHEVALIER PRINCE	13.400000	2.000000
1178	D270	CHANCHENG PRINCE	7.360000	2.000000

Big Time Baby (仁者莖心) is worth investing!



Horse with Highest Win Odds and Decent Win Rate (mean place <= 3)



horse_id	horse	win_odds	place	num_of_race
56	A157	BIG TIME BABY	28.285714	1.857143
868	C470	MIGHTY GIANT	20.600000	2.714286
1058	D133	SEATTLE CHOICE	16.260000	3.000000
1199	D298	CHEVALIER PRINCE	13.400000	2.000000
76	A207	FANTASTIC SHOW	12.100000	2.583333
657	C229	SHINING ACE	11.413333	2.933333
751	C333	HONG KONG WIN	10.090000	2.600000
408	B391	LAKESHORE EAGLE	8.800000	2.875000
880	C483	WAR OF COURAGE	8.388889	2.333333
658	C231	BALLISTIC KING	7.930000	3.000000



Good Choices for place:

1. Big Time Baby (仁者莖心)
2. Mighty Giant (高大威猛)
3. Seattle Choice (翡翠精選)
4. Chevalier Prince (超勁勇士)
5. Fantastic Show (爆驕)

Question time!

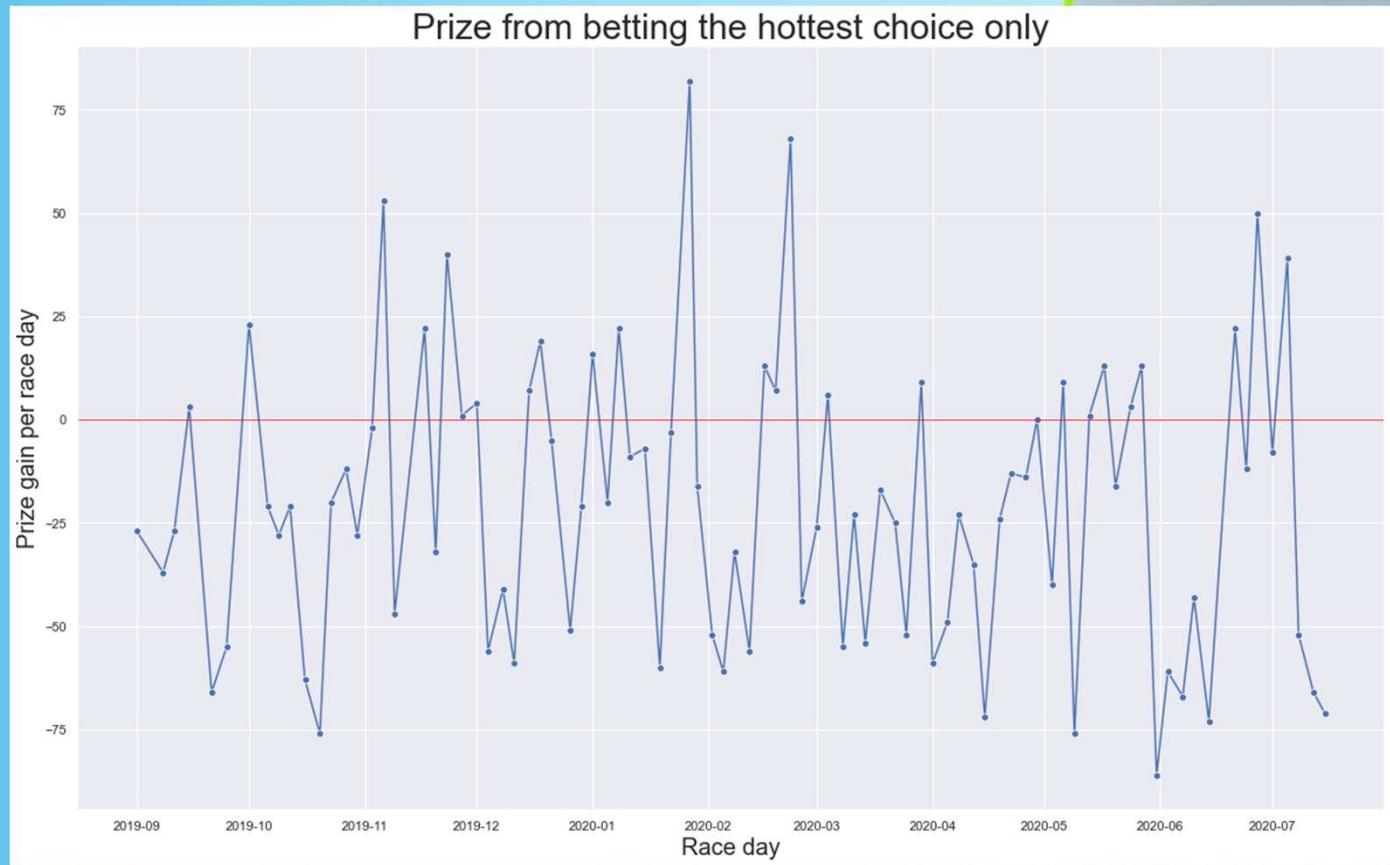
How much can you win if you bet \$10 on the horse with lowest win odd (獨贏賠率) over last season (828 games)?



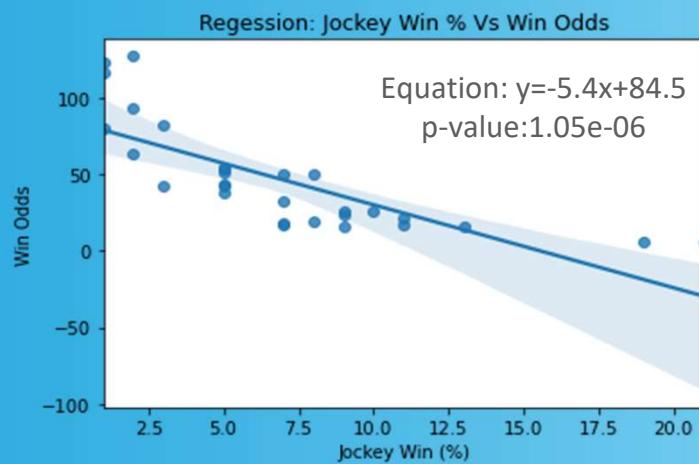
Prize you can win by betting hottest choice

Result:

Total number of race	\$828
Amount of each bet	\$10
Prize gained	\$6458
Net Amount	-\$1822
Accuracy	29.2%



Win Odds: Public VS Estimated By (Jockey) Performance

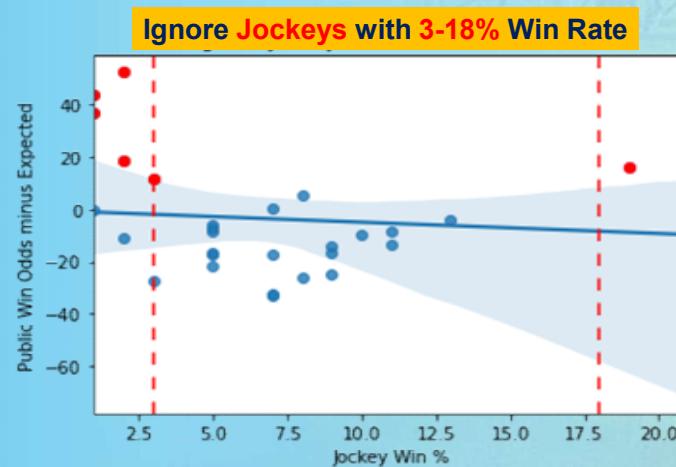


jockey	Jockey Win %	Public Win Odds minus Expected
H N Wong	2	52.583286
T H So	1	43.649216
H W Lai	1	37.003692
Z Purton	21	26.241076
M L Yeung	2	18.947722
J Moreira	19	16.207242
H T Mo	3	11.940857
A Sanna	8	5.604167
V Borges	7	0.302905

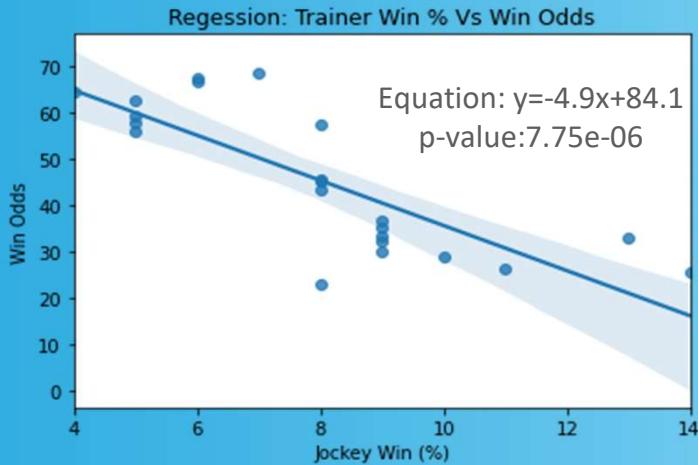
Save This: Top 10 Recommend Jockeys

Pick the top 2 Jockeys

jockey	Jockey Win %	Public Win Odds minus Expected
Z Purton	21	26.241076
J Moreira	19	16.207242
K Teetan	13	-4.177886
C Y Ho	11	-8.268700
G van Niekerk	11	-13.350000



Win Odds: Public VS Estimated By (Trainer) Performance

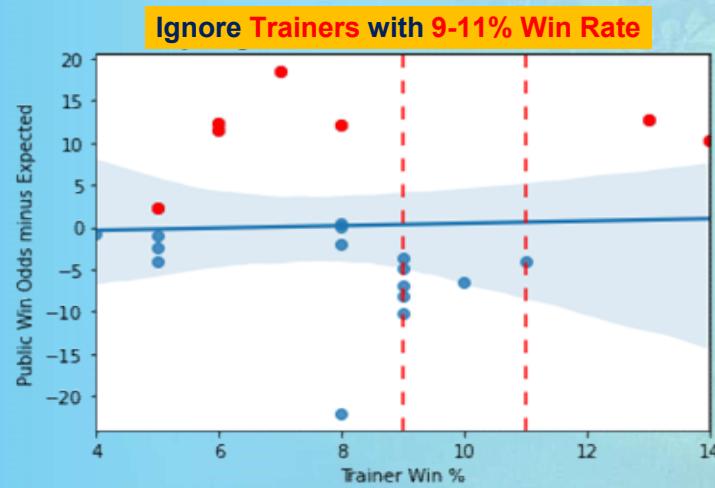


trainer	Trainer Win %	Public Win Odds minus Expected
W Y So	7	18.475472
K W Lui	13	12.758111
T P Yung	6	12.305800
K H Ting	8	12.194903
Y S Tsui	6	11.553266
P F Yiu	14	10.334519
D E Ferraris	5	2.409133
P O'Sullivan	8	0.481867
D J Hall	8	0.150255

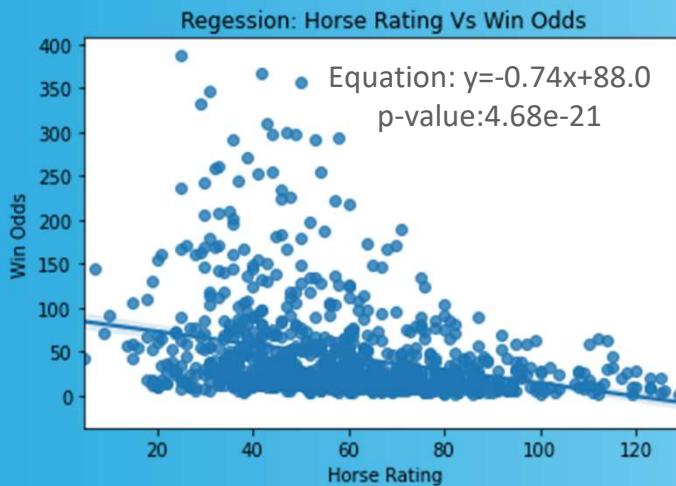
Save This: Top 10 Recommend Trainers

Pick the top 2 Trainers

trainer	Trainer Win %	Public Win Odds minus Expected
P F Yiu	14	10.334519
K W Lui	13	12.758111
A S Cruz	11	-3.904515
J Moore	10	-6.354417
C S Shum	9	-3.530169



Win Odds: Public VS Estimated By (Horse) Performance



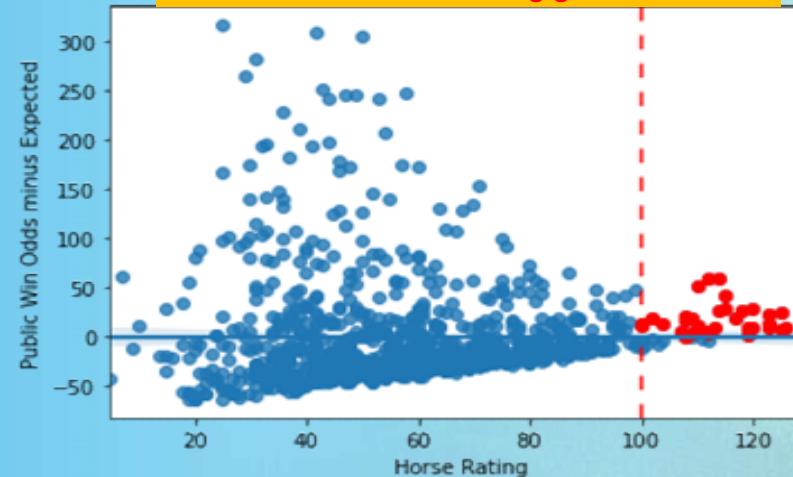
horse_id	Horse_Rating	Public Win Odds minus Expected
C513	25.0	317.166667
C195	42.0	309.080000
D190	50.0	305.833333
C468	31.0	282.273333
C350	29.0	265.960000
C539	43.0	252.620000
D212	58.0	248.520000
D175	47.0	246.780000
C505	49.0	245.635000
D189	53.0	243.095000

Save This: Top 10 Recommend Horse IDs

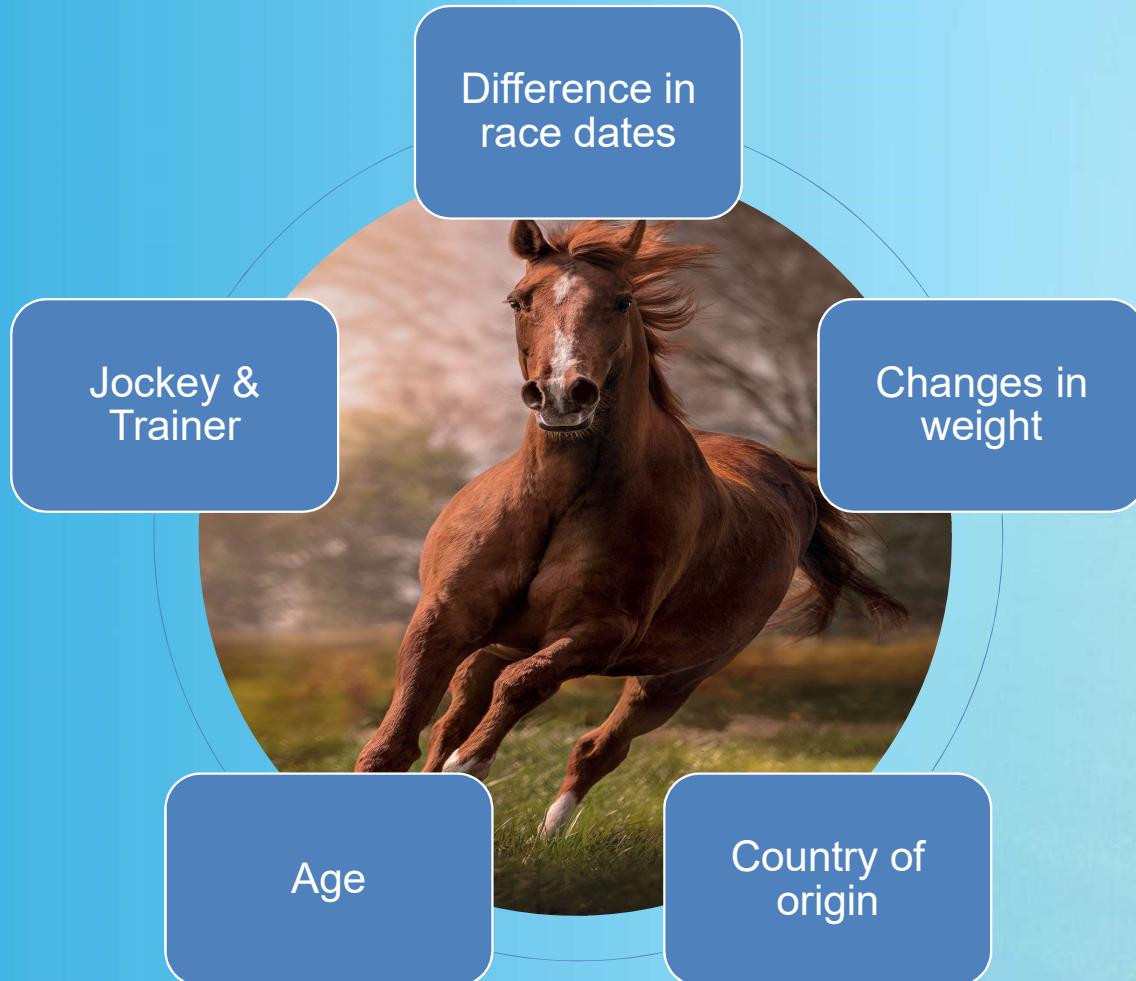
Pick the top Horse

horse_id	Horse Rating	Public Win Odds minus Expected
V380	130.0	10.125000
B101	129.0	9.331429
A299	126.0	10.315000
A252	125.0	25.025000
C150	125.0	8.557143

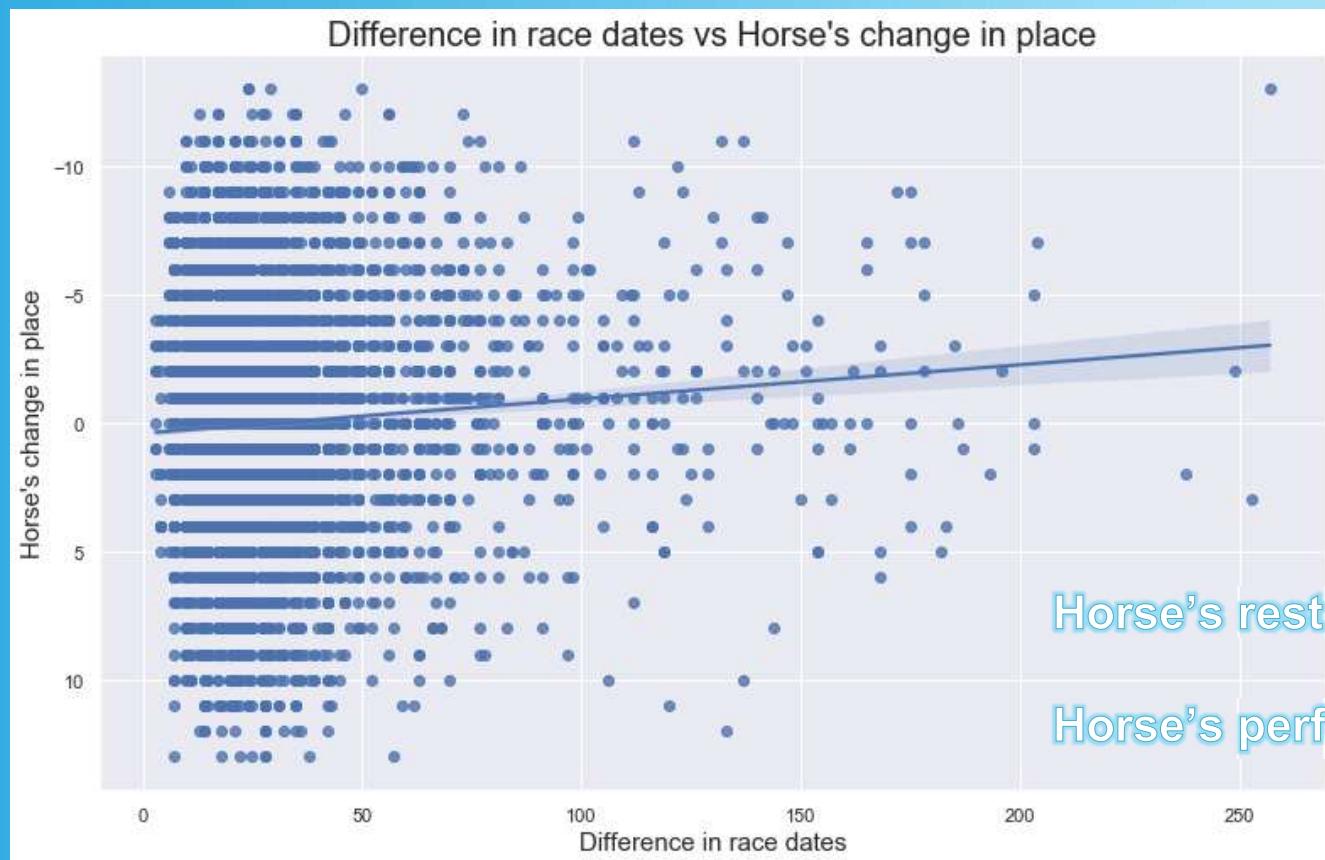
Focus on Horses with rating greater than 100



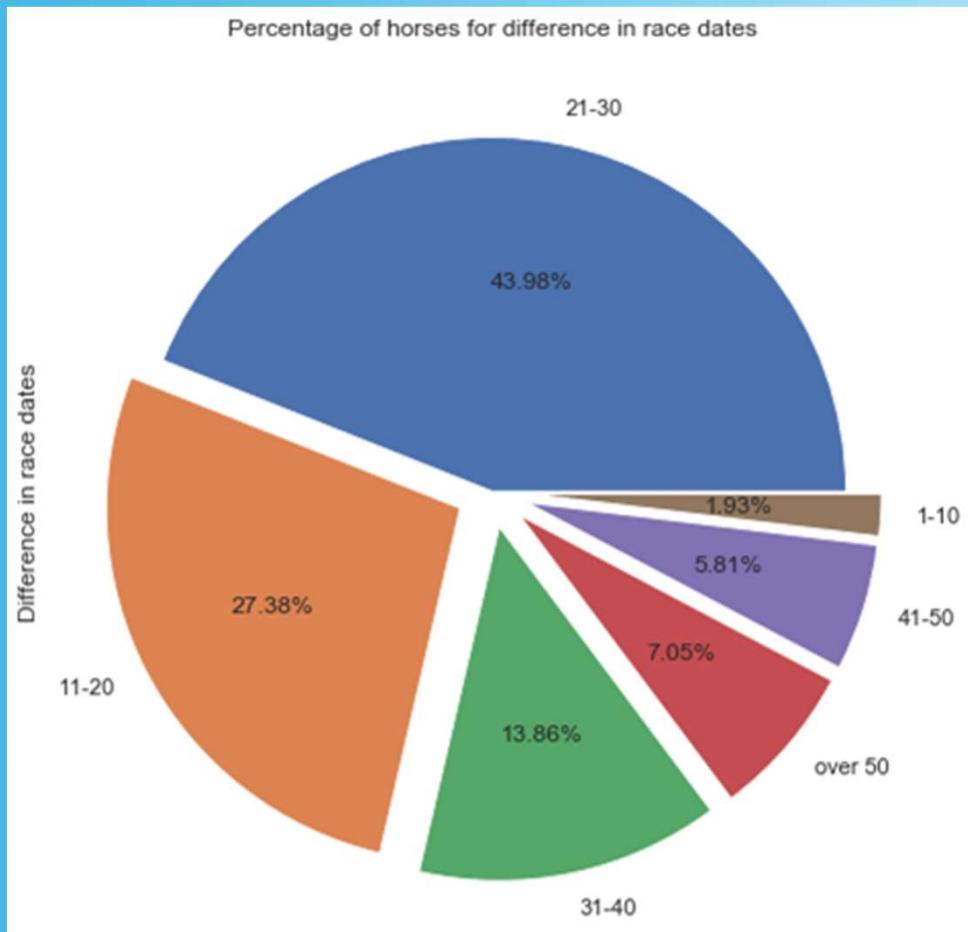
Factors affecting horses' performance



Difference in race dates



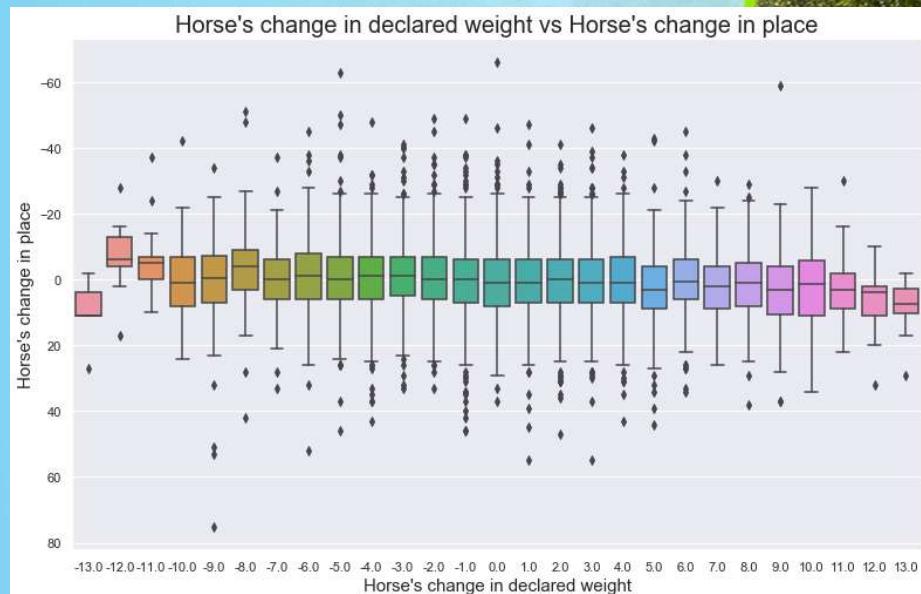
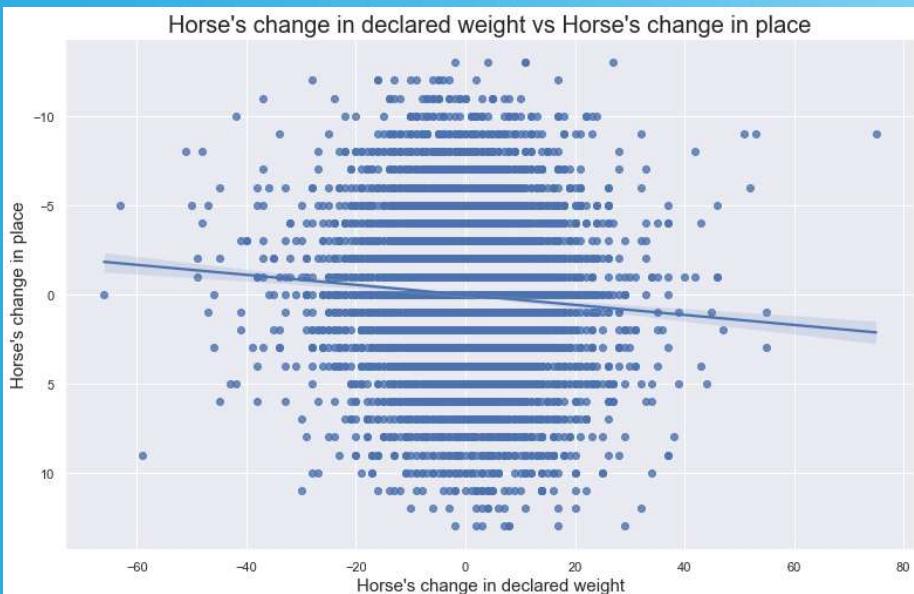
Horses usually rest for 30 days before next race



Changes in weight

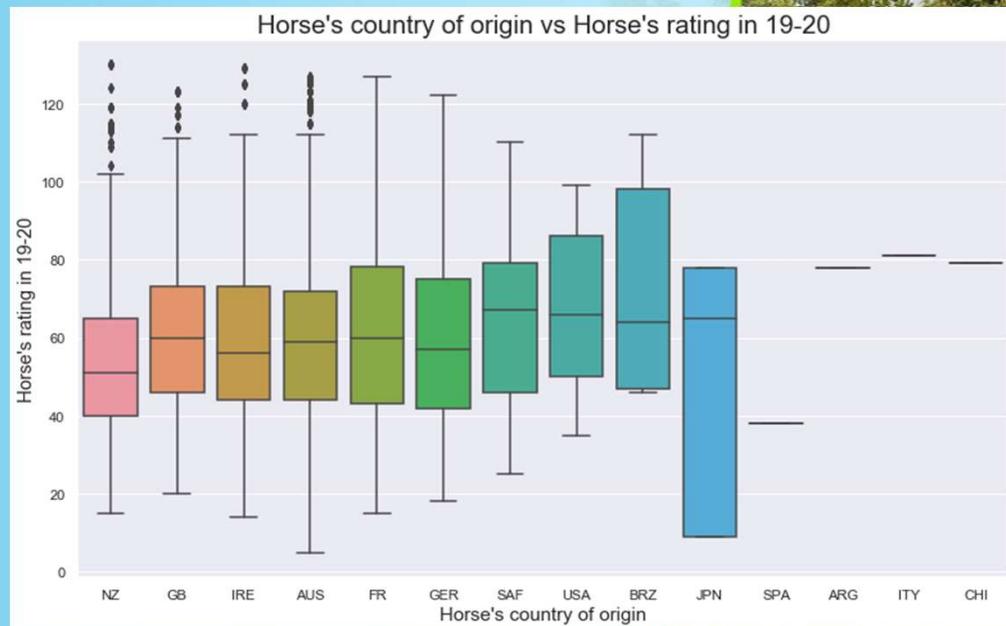
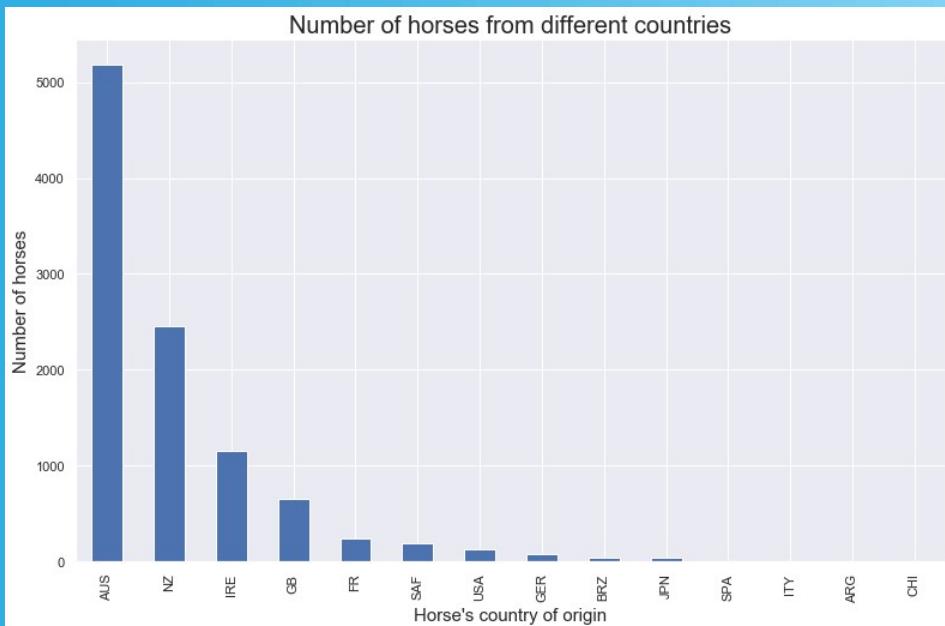
Horse's declared weight ↓

Horse's performance ↑



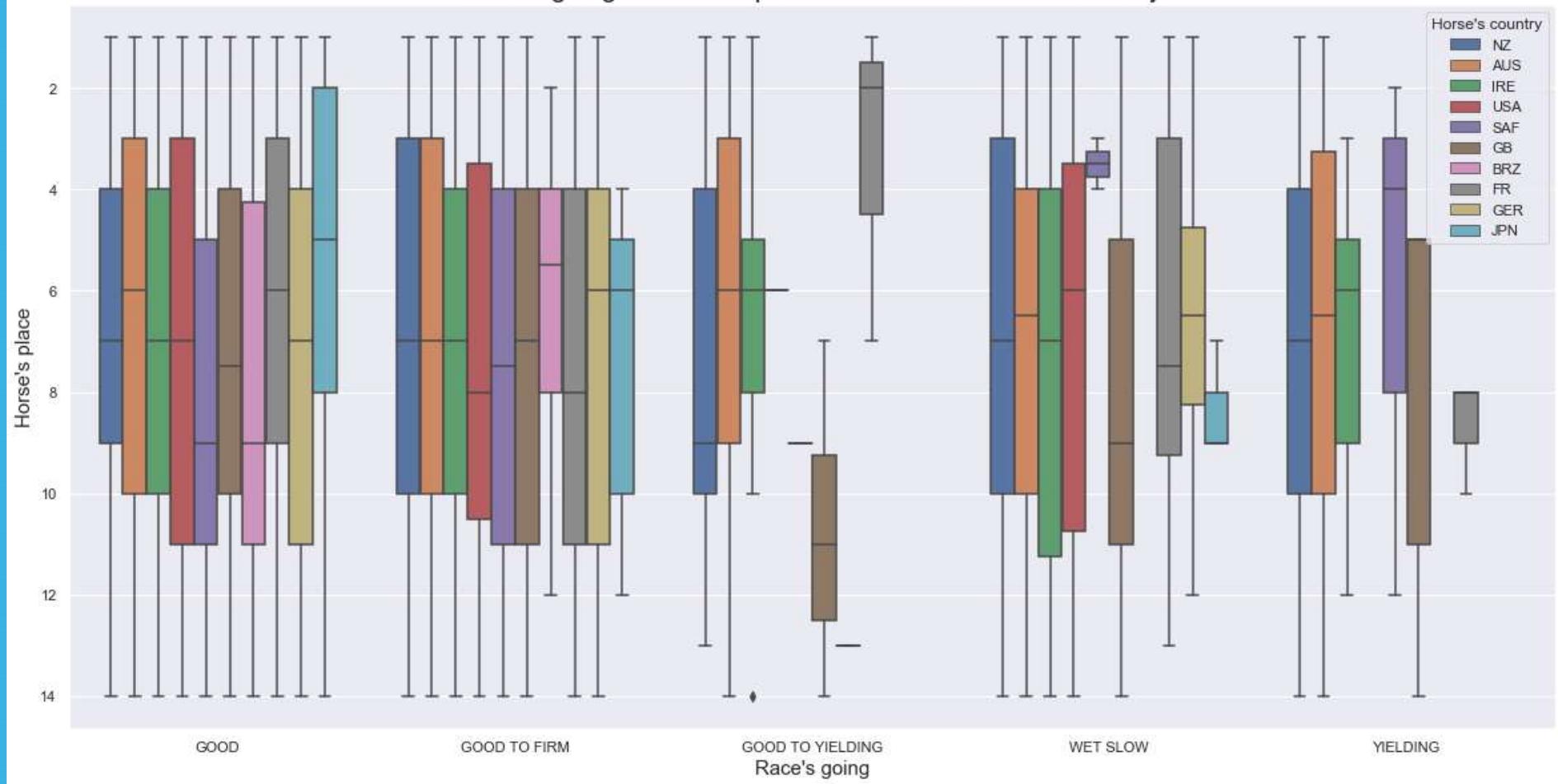
Country of origin

- Most horses are from Australia, New Zealand, Ireland and Great Britain
- Horses from Brazil had higher ratings in the season of 19-20.

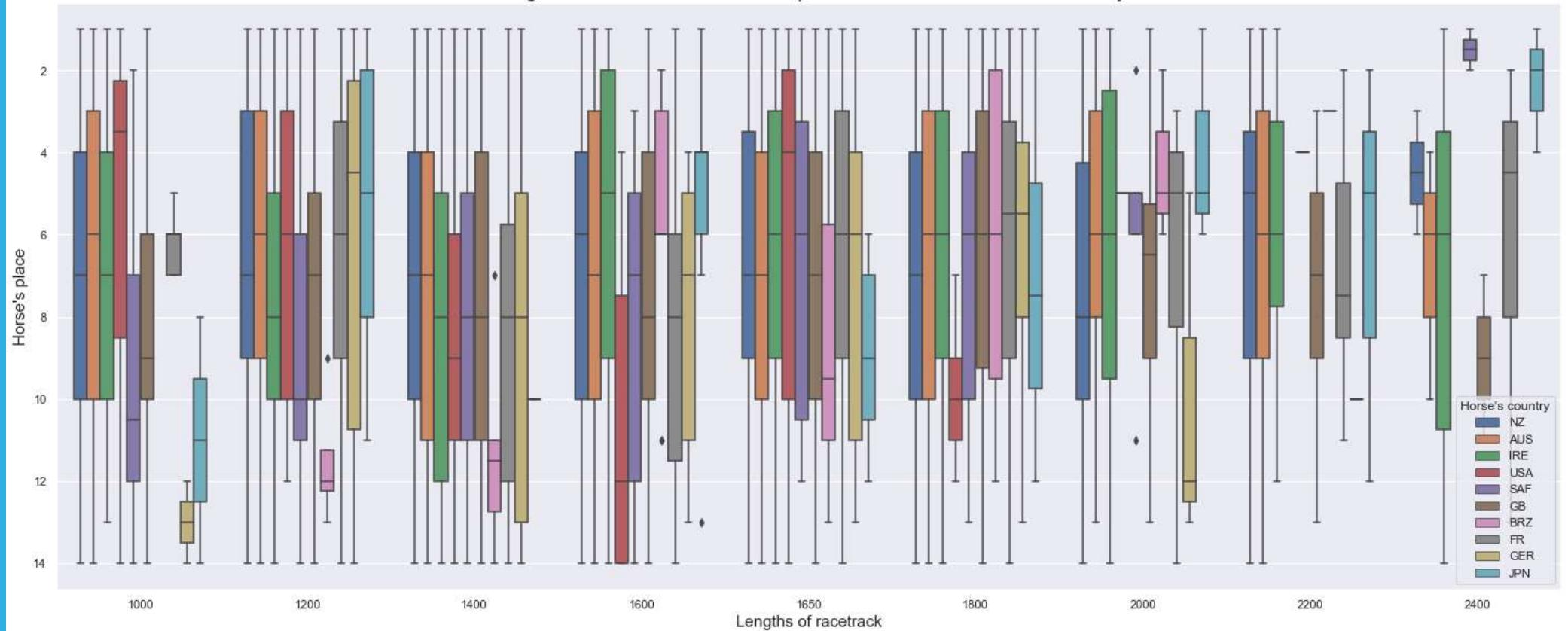




Race's going vs Horse's place in relation to Horse's country

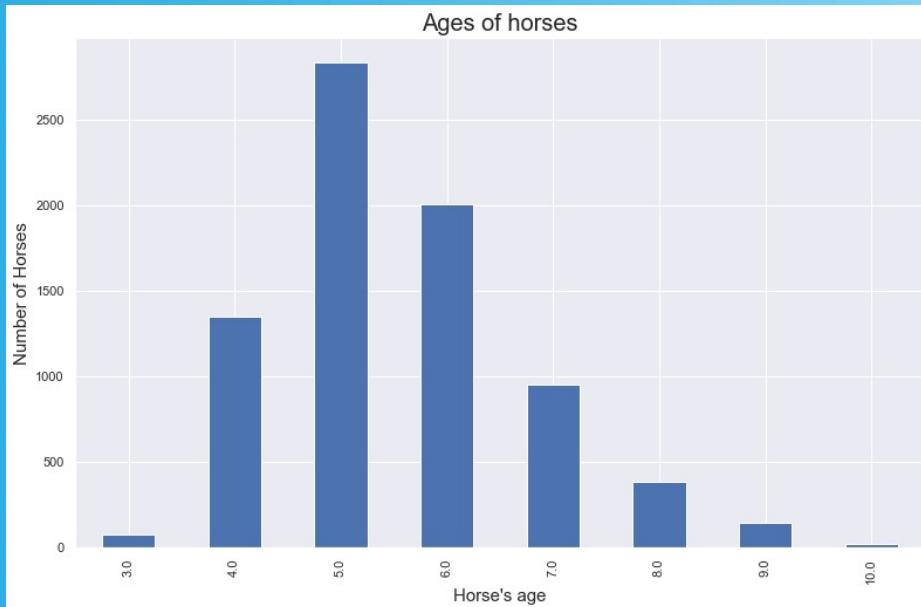


Lengths of racetrack vs Horse's place in relation to Horse's country

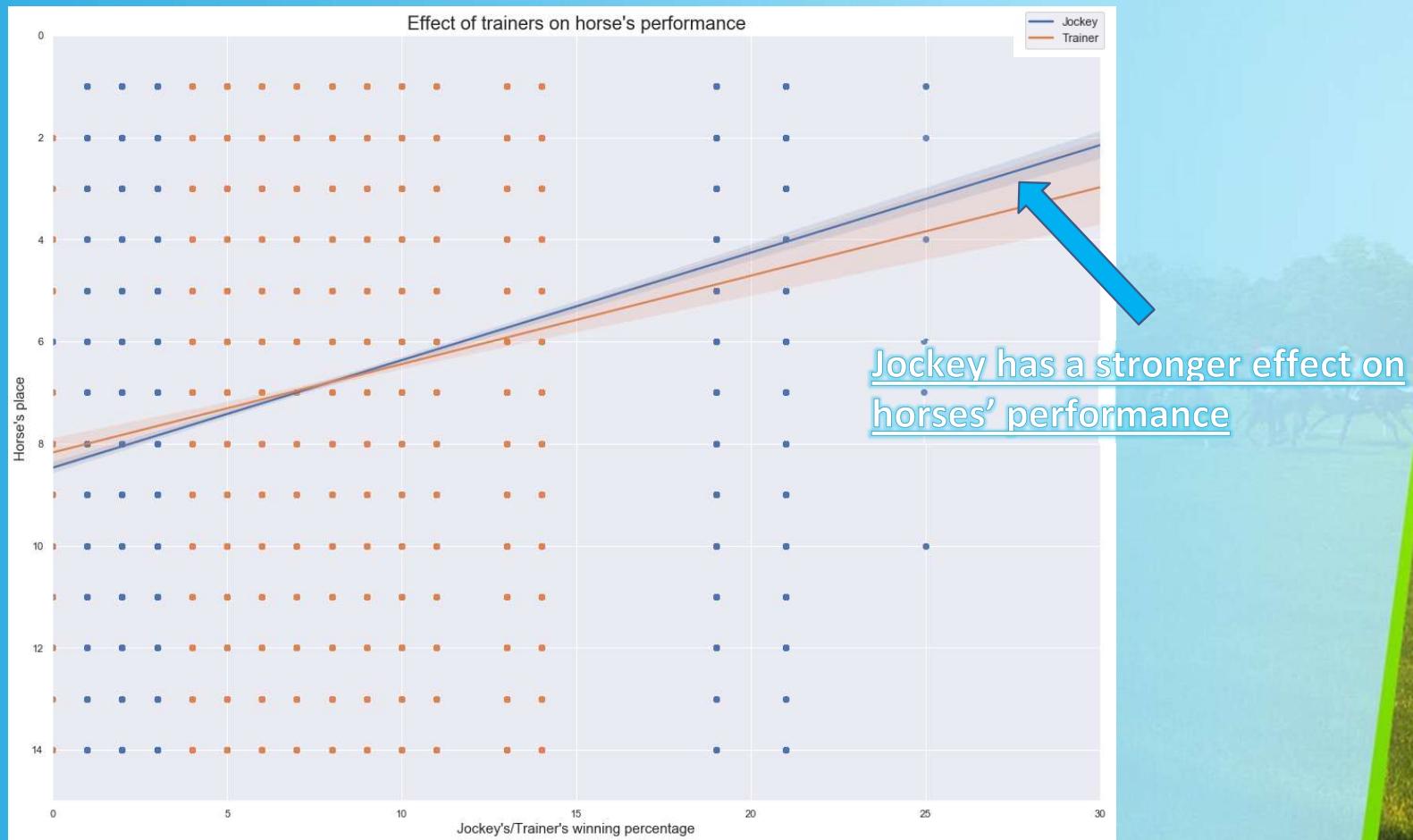


Age

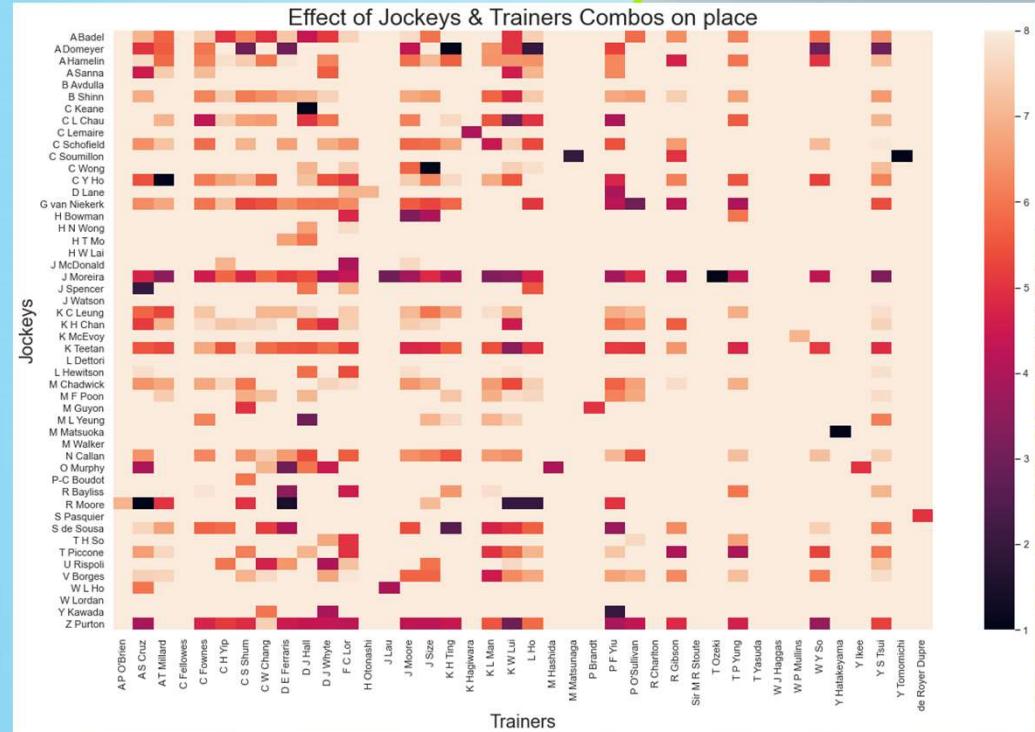
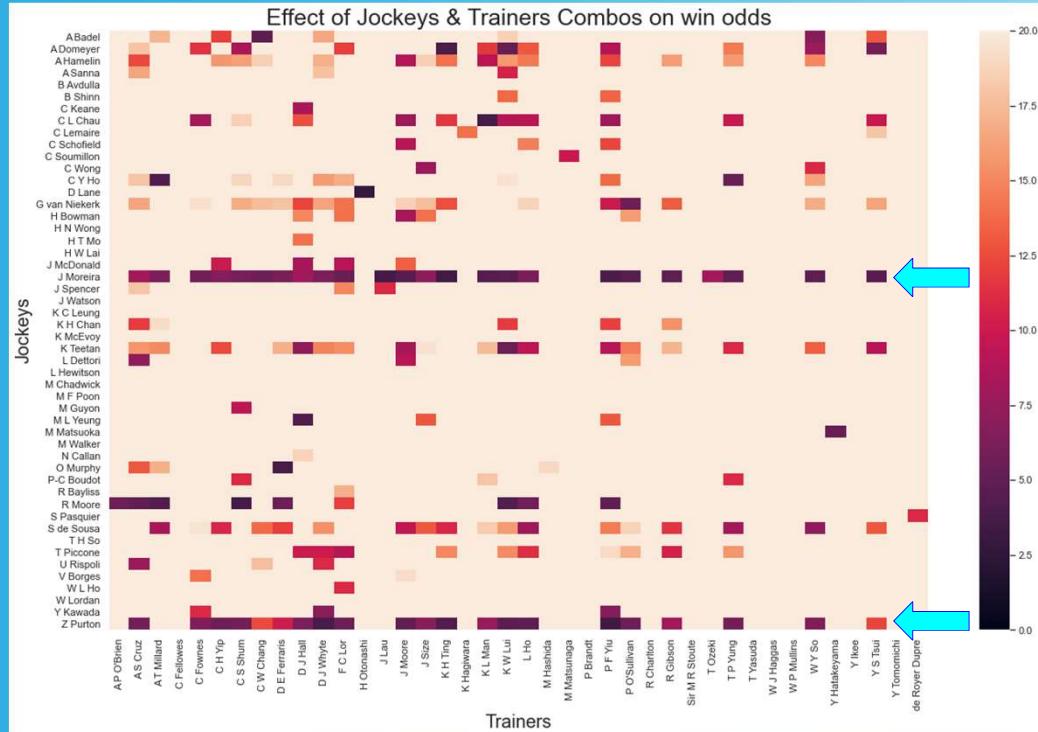
- Most horses are around the age of 4 to 6
- Perform best at the age of 5 to 6



Effects of jockeys and trainer on place



Effects of jockeys and trainer on place



Challenges

- Different layouts for different races
- Difficult to find useful insights
- Required domain expertise

Next Steps

- Data preprocessing
- Build machine learning model
 - Linear regression/DNN
- Investigate best strategy on pools
- Find more data from previous seasons



Conclusion

- Jockey is a more important factor than trainer
- Country of origin, weight of horses, etc. also matter
- # Python Everyday
- Comments = {"Jockeys" : "Ignore 3-18% Win Rate",
"Trainers" : "Ignore 9-11% Win Rate"
}
- *Don't believe in conventional wisdom!*



Play Responsibly!

- No person under 18 is allowed to bet or enter premises where bets are accepted.
- The maximum penalty for betting with illegal or overseas bookmakers is 9 months' imprisonment and a HK\$30,000 fine.
- [Don't Gamble your life away.](#) Call Ping Wo Fund hotline 1834 633 if you need help or counselling.

The Hong Kong Jockey Club | RESPONSIBLE GAMBLING

Don't Gamble to Excess
Play Responsibly

Ping Wo Fund Hotline
1834 633

Online Counselling Service