

MS DHONI Performance Analysis (Is he still good enough to play IPL)



Let's read IPL ball by ball Dataset

In [332]:

```
1 import warnings
2 warnings.filterwarnings('ignore')
3
4 import pandas as pd
5 import numpy as np
6
7 import matplotlib.pyplot as plt
8
9 #to display all rows columns
10 pd.set_option('display.max_rows', None)
11 pd.set_option('display.max_columns', None)
12 pd.set_option('display.expand_frame_repr', False)
13 pd.set_option('max_colwidth', -1)
```

In [333]:

```
1 df = pd.read_csv('cleaned_ipl_dataset_2008_to_2023.csv')
```

In [334]:

```
1 df.head(1)
```

Out[334]:

	match_id	season	start_date	venue	innings	ball	batting_team	bowling_team	striker	non_striker	bowler	i
0	335982	2008	2008-04-18	M.Chinnaswamy Stadium	1	0.1	Kolkata Knight Riders	Royal Challengers Bangalore	SC Ganguly	BB McCullum	P Kumar	

In [336]:

```
1 df.innings.unique() #check super over data + super over data
```

Out[336]:

```
array([1, 2], dtype=int64)
```

In [337]:

```
1 df = df[(df.innings == 1) | (df.innings == 2)]
```

In [338]:

```
1 df.innings.unique() #check super over data + super over data
```

Out[338]:

```
array([1, 2], dtype=int64)
```

In [165]:

```
1 # What are the numbers when ABD faces Bumrah?
2 # step 1: Filter by player names - Done
3 # step 2: Use these names & assign it to striker & bowler - Done
4 # step 3: Get the required columns - Done
```

In [339]:

```
1 Dhoni_df = df[df.striker == 'MS Dhoni']
```

In [340]:

```
1 Dhoni_df.head(1)
```

Out[340]:

	match_id	season	start_date	venue	innings	ball	batting_team	bowling_team	striker	non_striker	bowler	runs
265	335983	2008	2008-04-19	Punjab Cricket Association IS Bindra Stadium	1	6.3	Chennai Super Kings	Kings XI Punjab	MS Dhoni	MEK Hussey	IK Pathan	

In [341]:

```
1 SeasonbySeason =pd.DataFrame(Dhoni_df.groupby('season')['runs_off_bat'].sum()).reset_index()
```

In [342]:

```
1 bowled_faced=pd.DataFrame(Dhoni_df.groupby('season')['ball'].count()).reset_index()
```

In [343]:

```
1 SeasonbySeason= SeasonbySeason.merge(bowled_faced, on = 'season', how = 'left')
```

In [344]:

```
1 SeasonbySeason
```

Out[344]:

	season	runs_off_bat	ball
0	2008	414	319
1	2009	332	270
2	2010	287	215
3	2011	392	247
4	2012	358	283
5	2013	461	298
6	2014	371	258
7	2015	372	309
8	2016	284	220
9	2017	290	261
10	2018	455	321
11	2019	416	317
12	2020	200	175
13	2021	114	111
14	2022	232	198
15	2023	104	63

In [345]:

```
1 SeasonbySeason['strike rate'] = 100 * SeasonbySeason['runs_off_bat'] / SeasonbySeason['ball']
```

In [346]:

```
1 SeasonbySeason
```

Out[346]:

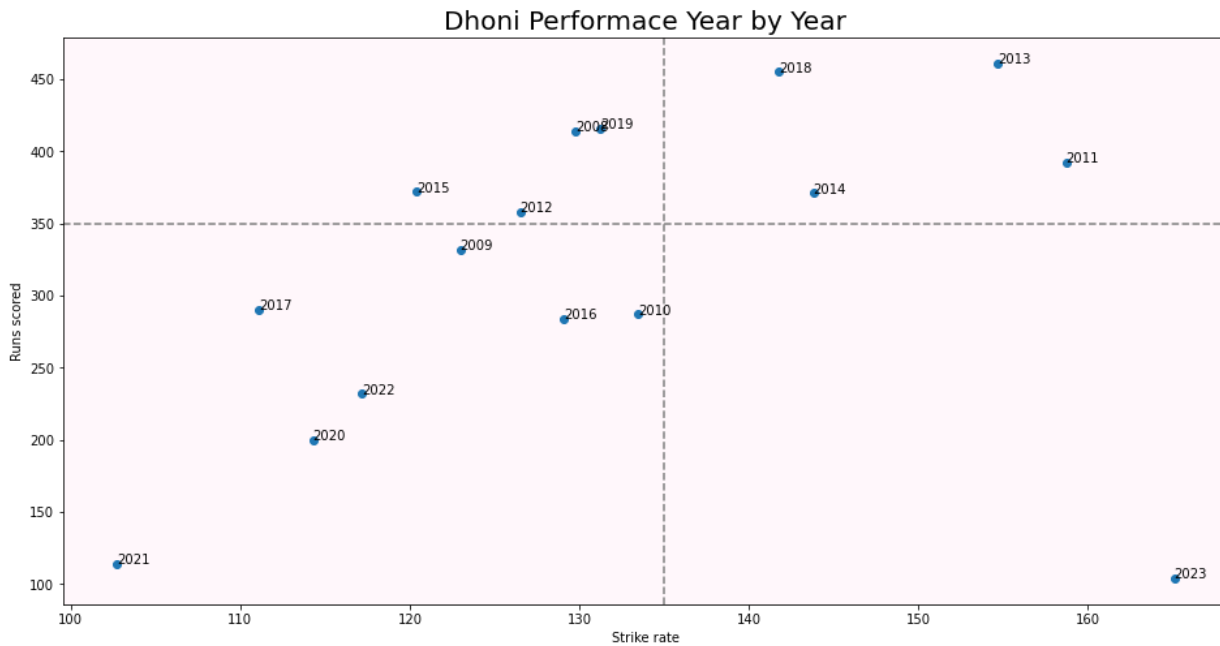
	season	runs_off_bat	ball	strike rate
0	2008	414	319	129.780564
1	2009	332	270	122.962963
2	2010	287	215	133.488372
3	2011	392	247	158.704453
4	2012	358	283	126.501767
5	2013	461	298	154.697987
6	2014	371	258	143.798450
7	2015	372	309	120.388350
8	2016	284	220	129.090909
9	2017	290	261	111.111111
10	2018	455	321	141.744548
11	2019	416	317	131.230284
12	2020	200	175	114.285714
13	2021	114	111	102.702703
14	2022	232	198	117.171717
15	2023	104	63	165.079365

In [348]:

```
1 SeasonbySeason = SeasonbySeason.rename(columns={'strike rate': 'strike_rate'})
2
```

In [349]:

```
1 plt.figure(figsize = (16, 8))
2 plt.scatter(SeasonbySeason.strike_rate, SeasonbySeason.runs_off_bat)
3
4 for i in range(len(SeasonbySeason)):
5     plt.text(SeasonbySeason['strike_rate'][i], SeasonbySeason['runs_off_bat'][i], SeasonbySeason['season'][i])
6
7
8 plt.axvline(135, ls = '--', color = 'grey')
9 plt.axhline(350, ls = '--', color = 'grey')
10 plt.title('Dhoni Performance Year by Year', fontsize = 20)
11 plt.xlabel('Strike rate')
12 plt.ylabel('Runs scored')
13 plt.show()
```



Observation is Dhoni's Strike Rate and Runs scored are pretty decent since 2020 but his role is finisher as we need check how he performed as finisher in those year also we need to check how other finishers performance with respect to him

Dhoni's Stats as finishers (SEASON BY SEASON)



In [429]:

```
1 Finishers_stats = Dhoni_df[Dhoni_df.phase=="DO"]
```

In [430]:

```
1 Finishers_stats.head()
```

Out[430]:

	match_id	season	start_date	venue	innings	ball	batting_team	bowling_team	striker	non_striker	bowler
1728	335989	2008	2008-04-23	MA Chidambaram Stadium	1	16.3	Chennai Super Kings	Mumbai Indians	MS Dhoni	ML Hayden	MA Khote
1730	335989	2008	2008-04-23	MA Chidambaram Stadium	1	16.5	Chennai Super Kings	Mumbai Indians	MS Dhoni	ML Hayden	MA Khote
1731	335989	2008	2008-04-23	MA Chidambaram Stadium	1	16.6	Chennai Super Kings	Mumbai Indians	MS Dhoni	ML Hayden	MA Khote
1732	335989	2008	2008-04-23	MA Chidambaram Stadium	1	17.1	Chennai Super Kings	Mumbai Indians	MS Dhoni	ML Hayden	DS Kulkarni
1733	335989	2008	2008-04-23	MA Chidambaram Stadium	1	17.2	Chennai Super Kings	Mumbai Indians	MS Dhoni	ML Hayden	DS Kulkarni

In [431]:

```
1 Finishers_stats_runs =pd.DataFrame(Finishers_stats.groupby('season')['runs_off_bat'].sum()).reset_index()
```

In [432]:

```
1 Finishers_stats_runs_balls =pd.DataFrame(Finishers_stats.groupby('season')['ball'].count()).reset_index()
```

In [433]:

```
1 Finishers_stats_overall = Finishers_stats_runs.merge(Finishers_stats_runs_balls, on = 'season', how = 'left')
```

In [434]:

```
1 Finishers_stats_overall
```

Out[434]:

	season	runs_off_bat	ball
0	2008	162	86
1	2009	109	65
2	2010	80	33
3	2011	212	97
4	2012	172	112
5	2013	240	129
6	2014	253	142
7	2015	179	106
8	2016	168	92
9	2017	134	84
10	2018	252	129
11	2019	245	139
12	2020	97	61
13	2021	74	51
14	2022	153	93
15	2023	102	59

In [435]:

```
1 Finishers_stats_overall['strike rate']= 100* Finishers_stats_overall['runs_off_bat']/Finishers_stats_overall
```

In [436]:

```
1 Finishers_stats_overall
```

Out[436]:

	season	runs_off_bat	ball	strike rate
0	2008	162	86	188.372093
1	2009	109	65	167.692308
2	2010	80	33	242.424242
3	2011	212	97	218.556701
4	2012	172	112	153.571429
5	2013	240	129	186.046512
6	2014	253	142	178.169014
7	2015	179	106	168.867925
8	2016	168	92	182.608696
9	2017	134	84	159.523810
10	2018	252	129	195.348837
11	2019	245	139	176.258993
12	2020	97	61	159.016393
13	2021	74	51	145.098039
14	2022	153	93	164.516129
15	2023	102	59	172.881356

In [437]:

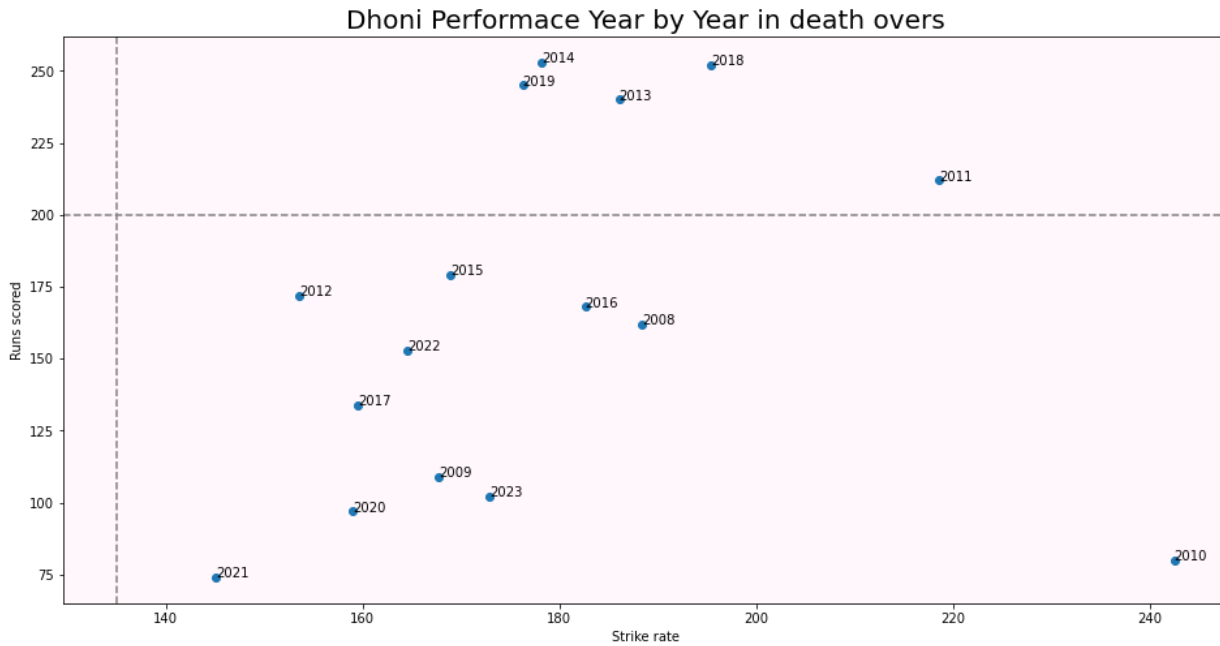
```
1 Finishers_stats_overall['strike rate']= 100* Finishers_stats_overall['runs_off_bat']/Finishers_stats_overall
```

In [438]:

```
1 Finishers_stats_overall = Finishers_stats_overall.rename(columns={'strike rate': 'strike_rate'})
2
```

In [439]:

```
1 plt.figure(figsize = (16, 8))
2 plt.scatter(Finishers_stats_overall.strike_rate, Finishers_stats_overall.runs_off_bat)
3
4 for i in range(len(Finishers_stats_overall)):
5     plt.text(Finishers_stats_overall['strike_rate'][i], Finishers_stats_overall['runs_off_bat'][i], Finishers_stats_overall['year'][i])
6
7
8 plt.axvline(135, ls = '--', color = 'grey')
9 plt.axhline(200, ls = '--', color = 'grey')
10 plt.title('Dhoni Performance Year by Year in death overs', fontsize = 20)
11 plt.xlabel('Strike rate')
12 plt.ylabel('Runs scored')
13 plt.show()
```



Dhoni has pretty decent records as finisher in 2020 and 2021 for CSK but 2022 was good but 2023 is decent but he faced very less balls

Let's compare his finishing with other finishers in same year

IPL Batters Stats from 2020 to 2023 as finishers (MIN 150 Balls faced)



In [440]:

```
1 All_Finishers_stats_2020 = df[(df.phase=="D0") & ((df.season>=2020) & (df.season<=2023))]
```

In [441]:

```
1 All_Finishers_stats_2020.head()
```

Out[441]:

	match_id	season	start_date	venue	innings	ball	batting_team	bowling_team	striker	non_striker	bowler	r
179057	1216492	2020	2020-09-19	Sheikh Zayed Stadium	1	16.1	Mumbai Indians	Chennai Super Kings	KH Pandya	KA Pollard	L Ngidi	
179058	1216492	2020	2020-09-19	Sheikh Zayed Stadium	1	16.2	Mumbai Indians	Chennai Super Kings	JL Pattinson	KA Pollard	L Ngidi	
179059	1216492	2020	2020-09-19	Sheikh Zayed Stadium	1	16.3	Mumbai Indians	Chennai Super Kings	KA Pollard	JL Pattinson	L Ngidi	
179060	1216492	2020	2020-09-19	Sheikh Zayed Stadium	1	16.4	Mumbai Indians	Chennai Super Kings	JL Pattinson	KA Pollard	L Ngidi	
179061	1216492	2020	2020-09-19	Sheikh Zayed Stadium	1	16.5	Mumbai Indians	Chennai Super Kings	KA Pollard	JL Pattinson	L Ngidi	

In [442]:

```
1 Finishers_stats_runs_2020 =pd.DataFrame(All_Finishers_stats_2020.groupby('striker')['runs_off_bat'].sum()).re
```

In [445]:

```
1 Finishers_stats_runs_2020
```

Out[445]:

	striker	runs_off_bat
0	A Badoni	212
1	A Manohar	85
2	A Mishra	13
3	A Nortje	43
4	A Zampa	5
5	AB de Villiers	358
6	AD Russell	309
7	AF Milne	13
8	AJ Hosein	16
9	AK Markram	142

In [446]:

```
1 Finishers_stats_runs_2020_bowled_faced=pd.DataFrame(All_Finishers_stats_2020.groupby('striker')['ball'].count())
```


In [447]:

1	Finishers_stats_runs_2020_bowled_faced		
51	DS Kulkarni	2	
52	DT Christian	15	
53	DW Steyn	1	
54	Dhruv Jurel	64	
55	E Lewis	17	
56	EJG Morgan	112	
57	F du Plessis	126	
58	FA Allen	7	
59	Fazalhaq Farooqi	13	
60	GD Phillips	21	
61	GHS Garton	4	
62	GJ Maxwell	157	
63	Gurkeerat Singh	38	

In [448]:

```
Finishers_stats_2020_overall = Finishers_stats_runs_2020.merge(Finishers_stats_runs_2020_bowled_faced, on = 'striker')
```

In [449]:

```
1 Finishers_stats_2020_overall.dtypes
```

Out[449]:

```
striker      object
runs_off_bat int64
ball         int64
dtype: object
```

In [450]:

```
1 Finishers_stats_2020_overall= Finishers_stats_2020_overall[Finishers_stats_2020_overall.ball >150]
```

In [451]:

```
1 Finishers_stats_2020_overall['strike rate']= 100* Finishers_stats_2020_overall['runs_off_bat']/Finishers_stats_2020_overall['ball']
```

In [452]:

```
1 Finishers_stats_2020_overall
```

Out[452]:

	striker	runs_off_bat	ball	strike rate
5	AB de Villiers	358	163	219.631902
6	AD Russell	309	186	166.129032
11	AR Patel	328	205	160.000000
42	DA Miller	316	205	154.146341
62	GJ Maxwell	280	157	178.343949
67	HH Pandya	446	248	179.838710
98	KA Pollard	432	244	177.049180
99	KD Karthik	528	295	178.983051
104	KL Rahul	311	177	175.706215
119	M Shahruxh Khan	237	155	152.903226
131	MP Stoinis	328	189	173.544974
133	MS Dhoni	426	264	161.363636
145	N Pooran	346	205	168.780488
170	R Parag	222	159	139.622642
174	R Tewatia	427	256	166.796875
175	RA Jadeja	583	336	173.511905
180	RK Singh	338	186	181.720430
188	Rashid Khan	286	180	158.888889
203	SO Hetmyer	588	319	184.326019

In [453]:

```
1 Finishers_stats_2020_overall.reset_index(inplace = True, drop = True)
```

In [456]:

```
1 Finishers_stats_2020_overall
```

Out[456]:

	striker	runs_off_bat	ball	strike_rate
0	AB de Villiers	358	163	219.631902
1	AD Russell	309	186	166.129032
2	AR Patel	328	205	160.000000
3	DA Miller	316	205	154.146341
4	GJ Maxwell	280	157	178.343949
5	HH Pandya	446	248	179.838710
6	KA Pollard	432	244	177.049180
7	KD Karthik	528	295	178.983051
8	KL Rahul	311	177	175.706215
9	M Shahrukh Khan	237	155	152.903226
10	MP Stoinis	328	189	173.544974
11	MS Dhoni	426	264	161.363636
12	N Pooran	346	205	168.780488
13	R Parag	222	159	139.622642
14	R Tewatia	427	256	166.796875
15	RA Jadeja	583	336	173.511905
16	RK Singh	338	186	181.720430
17	Rashid Khan	286	180	158.888889
18	SO Hetmyer	588	319	184.326019

In []:

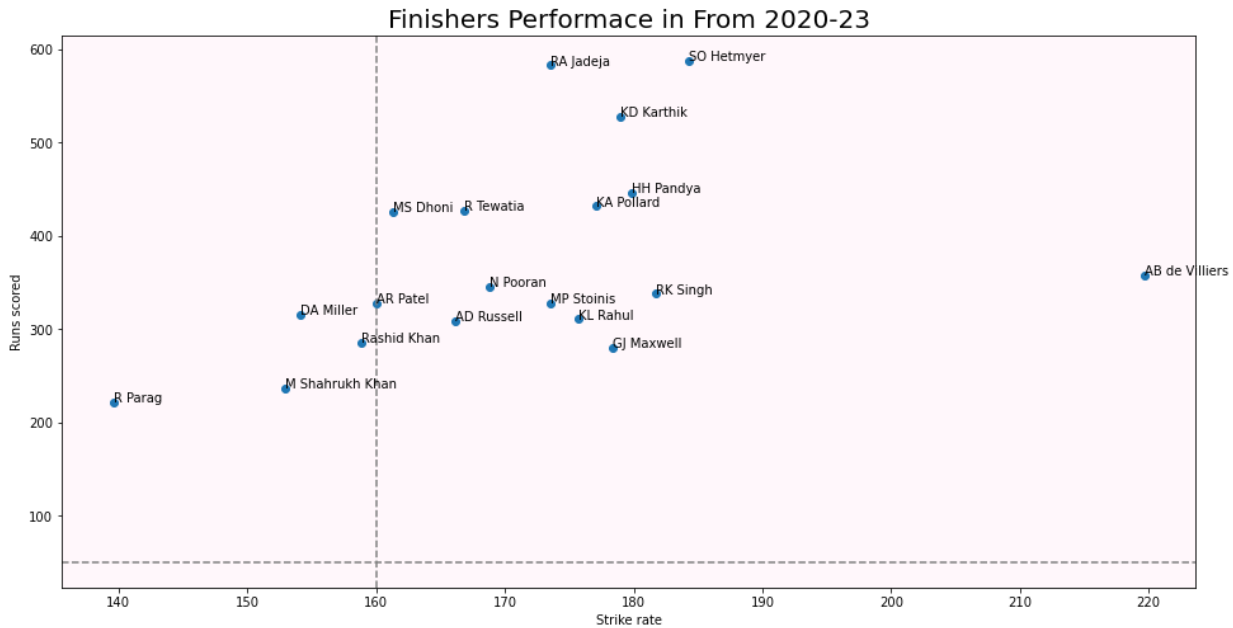
```
1
```

In [454]:

```
1 Finishers_stats_2020_overall = Finishers_stats_2020_overall.rename(columns={'strike rate': 'strike_rate'})
2
```

In [455]:

```
1 plt.figure(figsize = (16, 8))
2 plt.scatter(Finishers_stats_2020_overall.strike_rate, Finishers_stats_2020_overall.runs_off_bat)
3
4 for i in range(len(Finishers_stats_2020_overall)):
5     plt.text(Finishers_stats_2020_overall['strike_rate'][i], Finishers_stats_2020_overall['runs_off_bat'][i],
6
7
8 plt.axvline(160, ls = '--', color = 'grey')
9 plt.axhline(50, ls = '--', color = 'grey')
10 plt.title('Finishers Performance in From 2020-23', fontsize = 20)
11 plt.xlabel('Strike rate')
12 plt.ylabel('Runs scored')
13 plt.show()
```



Dhoni has good stats as finisher scoring 400+ runs with SR of 147 which is almost equivalent to Axar patel (In past 4 years)

But is It only role Dhoni is doing for CSK????

Answer is NO!!!!

DHONI BEHIND THE STUMPS



AS We know Dhoni is one of the Greatest cricketing mind behind the stumps. 3G, 4G and 5G then comes MS DHONI behind the stumps. he is still the quickest as we can't forgot Shubnam Gill's dismissal in IPL 2023 final

DHONI has always great asset to CSK in all round way!1 And it's true as batter he has been pretty decent in past years but as captain/leader/WK, he is great asset!!