IPL STATISTICS DASHBOARD

Submitted By:
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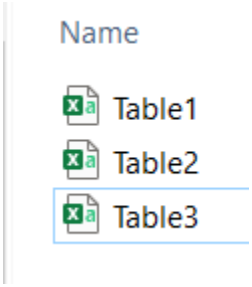
Submitted To:
Dr. Sharad Saxena

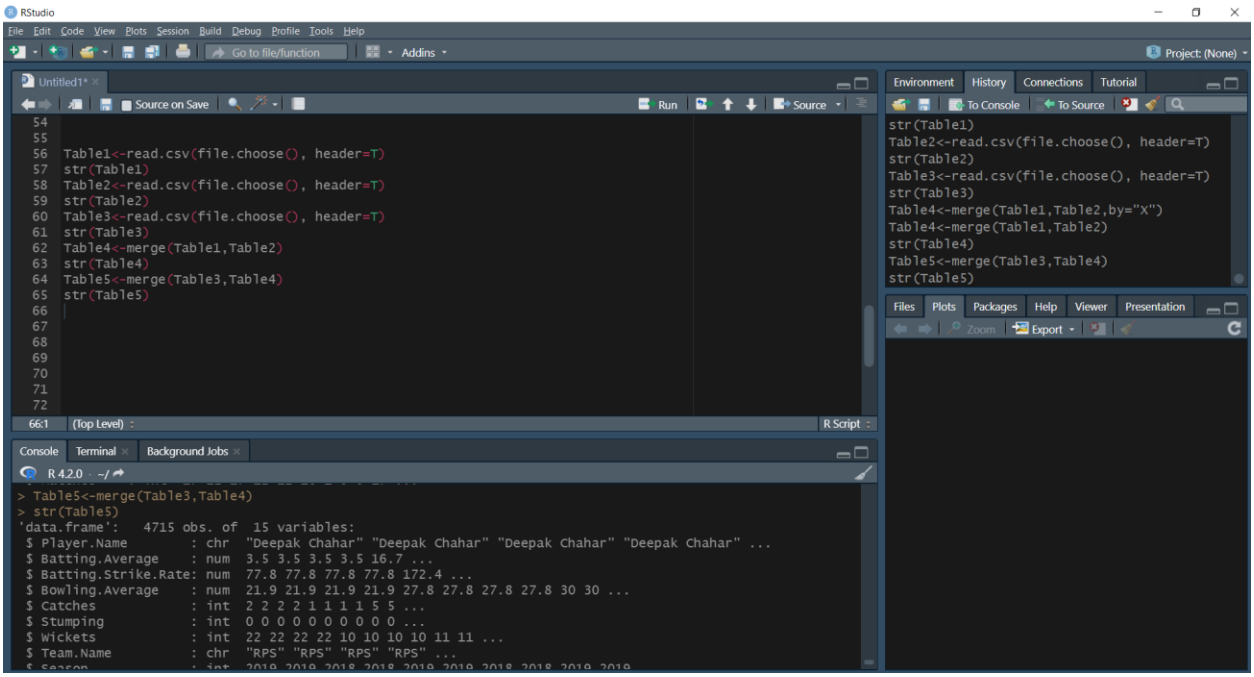
July 2022 – December 2022

OVERVIEW OF THE PROJECT

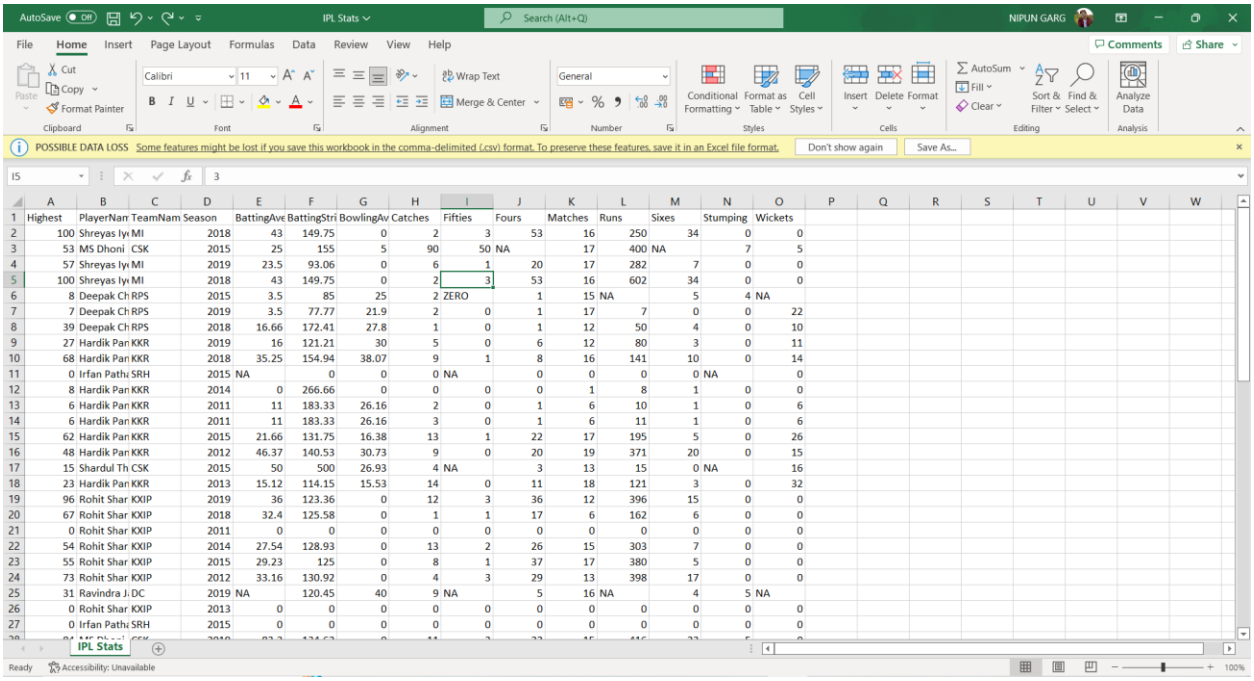
- The purpose of the project was to create innovative and interactive Tableau dashboards.
- Developed a IPL statistics Dashboard to analysis about the players performance in different seasons of IPL on the basis of Top Runs, Highest Wickets and so on.
- The data to be cleaned using R. The Dataset contained missing values and was cleaned using the R programming language.
- Tableau dashboards were created from the cleaned dataset.

SPLITTING AND MERGING OF DATASET



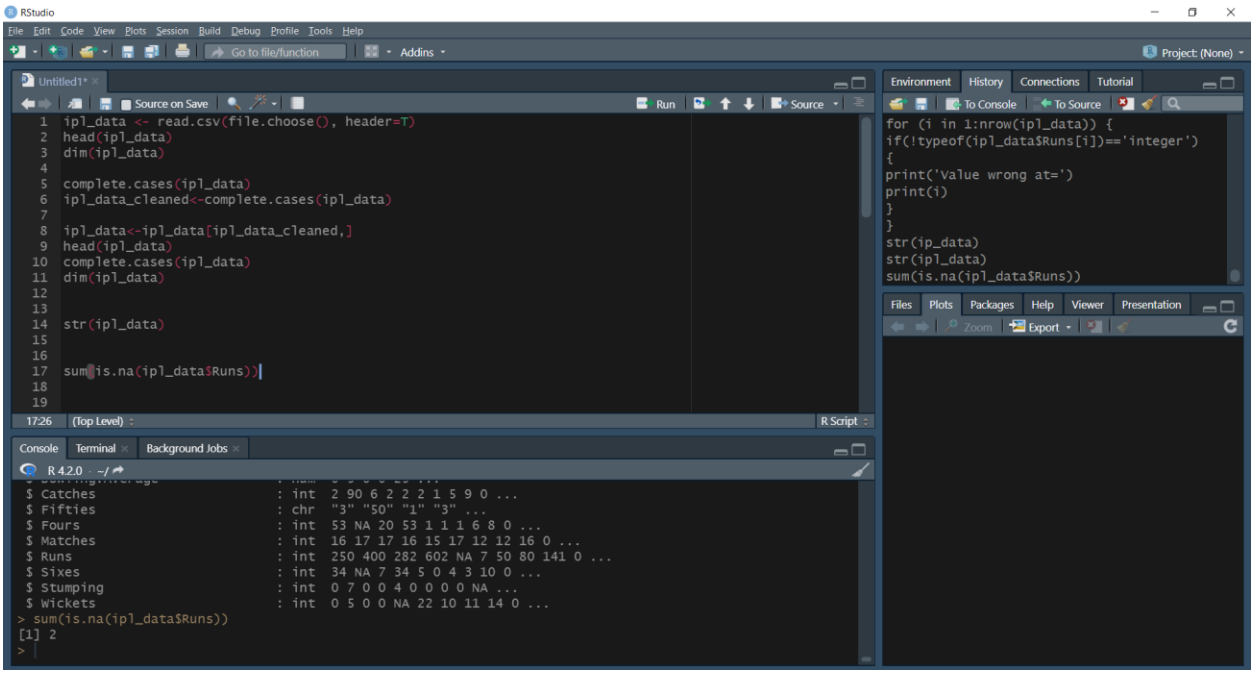


Raw Dataset:

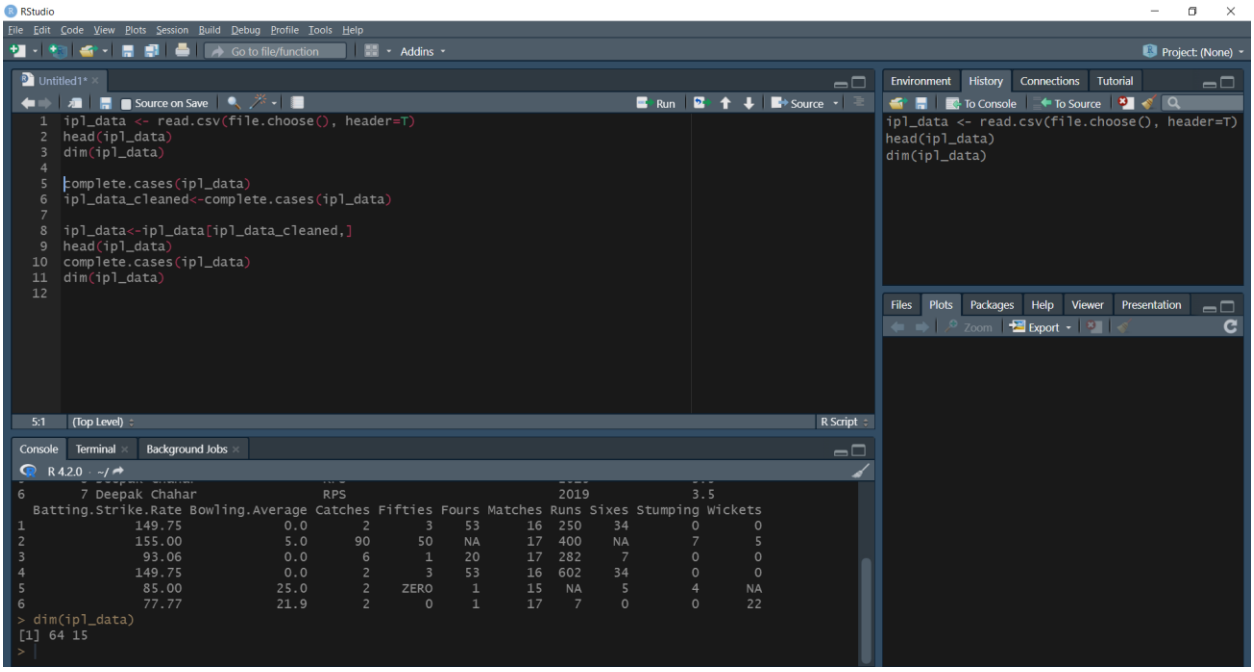


	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1	Highest	PlayerNam	TeamNam	Season	BattingAve	BattingStri	BowlingAv	Catches	Fifties	Fours	Matches	Runs	Sixes	Stumping	Wickets
2	100	Shreyas Iy	MI	2018	43	149.75	0	2	3	53	16	250	34	0	0
3	53	MS Dhoni	CSK	2015	25	155	5	90	50	NA	17	400	NA	7	5
4	57	Shreyas Iy	MI	2019	23.5	93.06	0	6	1	20	17	282	7	0	0
5	100	Shreyas Iy	MI	2018	43	149.75	0	2	3	53	16	602	34	0	0
6	8	Deepak Ch	RPS	2015	3.5	85	25	2	ZERO	1	15	NA	5	4	NA
7	7	Deepak Ch	RPS	2019	3.5	77.77	21.9	2	0	1	17	7	0	0	22
8	39	Deepak Ch	RPS	2018	16.66	172.41	27.8	1	0	1	12	50	4	0	10
9	27	Hardik Pan	KKR	2019	16	121.21	30	5	0	6	12	80	3	0	11
10	68	Hardik Pan	KKR	2018	35.25	154.94	38.07	9	1	8	16	141	10	0	14
11	0	Irfan Patha	SRH	2015	NA	0	0	0	NA	0	0	0	0	NA	0
12	8	Hardik Pan	KKR	2014	0	266.66	0	0	0	0	1	8	1	0	0
13	6	Hardik Pan	KKR	2011	11	183.33	26.16	2	0	1	6	10	1	0	6
14	6	Hardik Pan	KKR	2011	11	183.33	26.16	3	0	1	6	11	1	0	6
15	62	Hardik Pan	KKR	2015	21.66	131.75	16.38	13	1	22	17	195	5	0	26
16	48	Hardik Pan	KKR	2012	46.37	140.53	30.73	9	0	20	19	371	20	0	15
17	15	Shardul Th	CSK	2015	50	500	26.93	4	NA	3	13	15	0	NA	16
18	23	Hardik Pan	KKR	2013	15.12	114.15	15.53	14	0	11	18	121	3	0	32
19	96	Rohit Shar	KXIP	2019	36	123.36	0	12	3	36	12	396	15	0	0
20	67	Rohit Shar	KXIP	2018	32.4	125.58	0	1	1	17	6	162	6	0	0
21	0	Rohit Shar	KXIP	2011	0	0	0	0	0	0	0	0	0	0	0
22	54	Rohit Shar	KXIP	2014	27.54	128.93	0	13	2	26	15	303	7	0	0
23	55	Rohit Shar	KXIP	2015	29.23	125	0	8	1	37	17	380	5	0	0
24	73	Rohit Shar	KXIP	2012	33.16	130.92	0	4	3	29	13	398	17	0	0
25	31	Ravindra J	DC	2019	NA	120.45	40	9	NA	5	16	NA	4	5	NA
26	0	Rohit Shar	KXIP	2013	0	0	0	0	0	0	0	0	0	0	0
27	0	Irfan Patha	SRH	2015	0	0	0	0	0	0	0	0	0	0	0

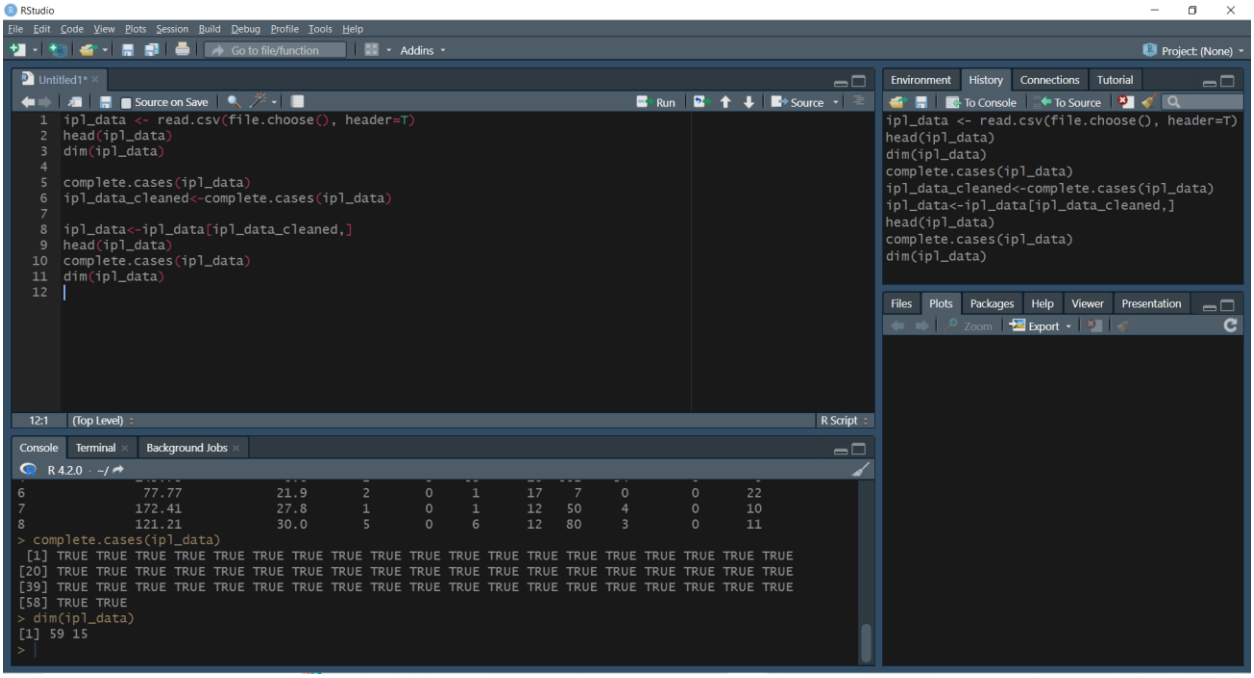
Data Preprocessing:



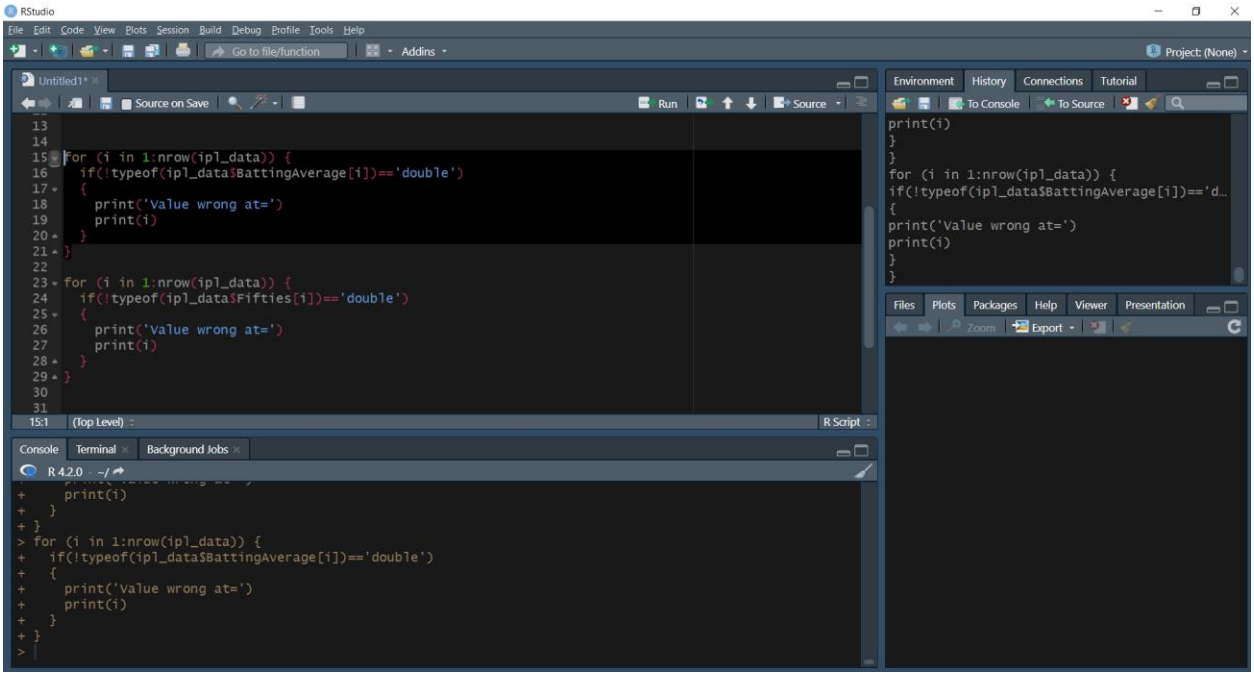
Before removing NA values:



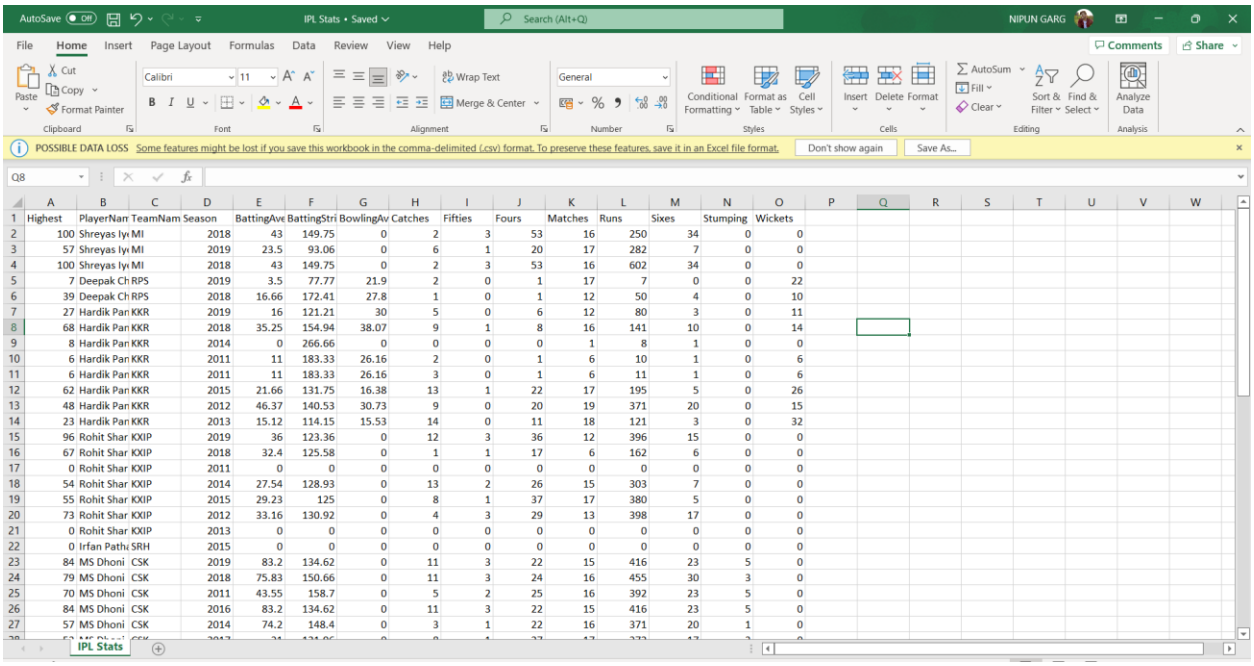
After removing NA values:



Check if all columns have valid values:



Final Dataset:



	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
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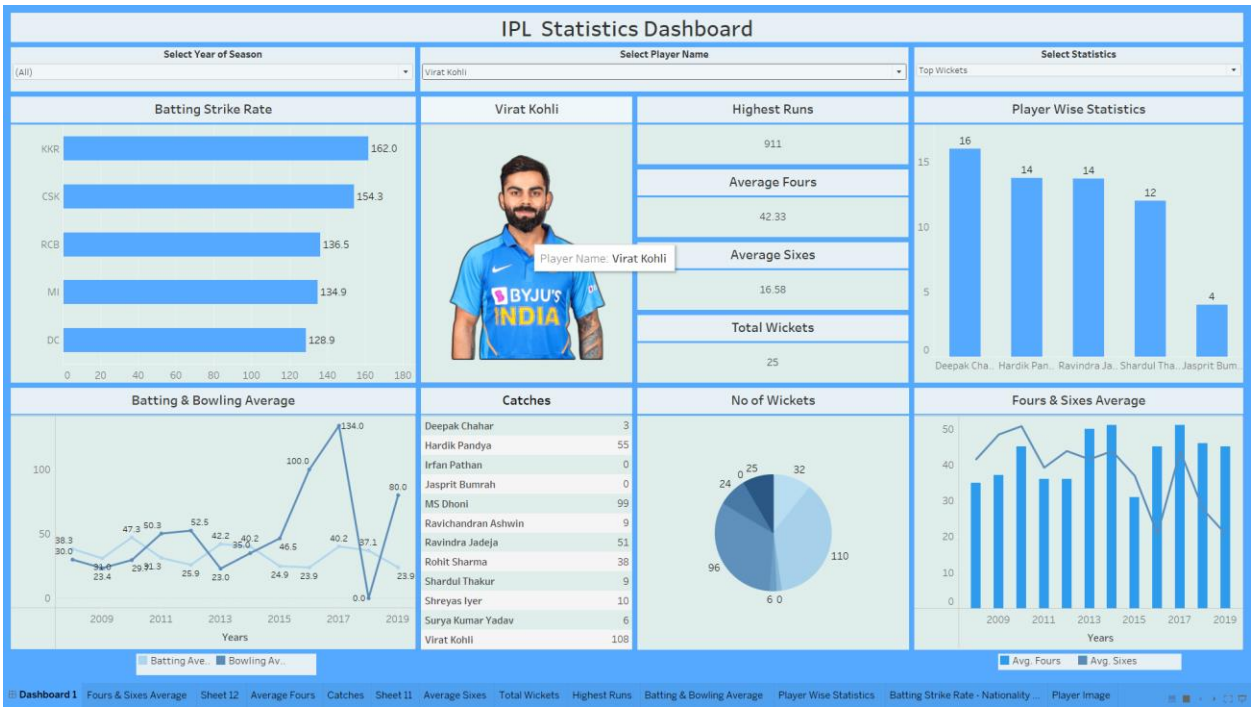
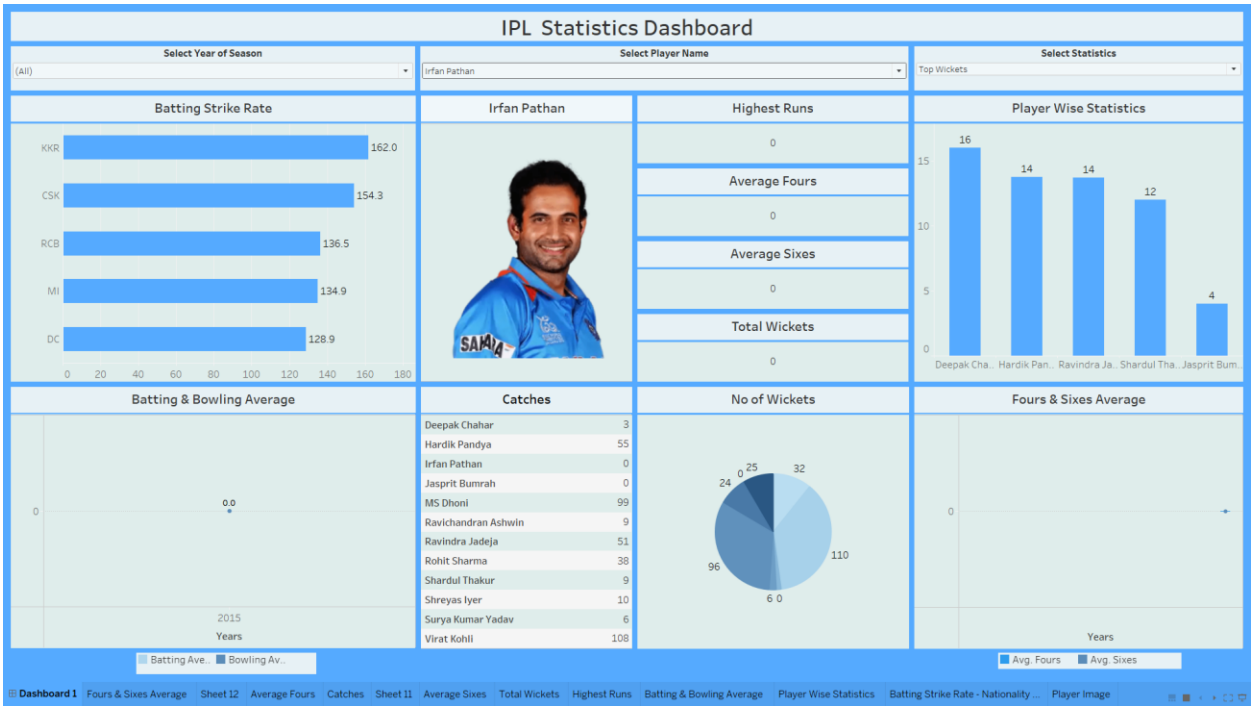
2	100	Shreyas Iy	MI	2018	43	149.75	0	2	3	53	16	250	34	0	0
3	57	Shreyas Iy	MI	2019	23.5	93.06	0	6	1	20	17	282	7	0	0
4	100	Shreyas Iy	MI	2018	43	149.75	0	2	3	53	16	602	34	0	0
5	7	Deepak Ch	RPS	2019	3.5	77.77	21.9	2	0	1	17	7	0	0	22
6	39	Deepak Ch	RPS	2018	16.66	172.41	27.8	1	0	1	12	50	4	0	10
7	27	Hardik Pan	KKR	2019	16	121.21	30	5	0	6	12	80	3	0	11
8	68	Hardik Pan	KKR	2018	35.25	154.94	38.07	9	1	8	16	141	10	0	14
9	8	Hardik Pan	KKR	2014	0	266.66	0	0	0	0	1	8	1	0	0
10	6	Hardik Pan	KKR	2011	11	183.33	26.16	2	0	1	6	10	1	0	6
11	6	Hardik Pan	KKR	2011	11	183.33	26.16	3	0	1	6	11	1	0	6
12	62	Hardik Pan	KKR	2015	21.66	131.75	16.38	13	1	22	17	195	5	0	26
13	48	Hardik Pan	KKR	2012	46.37	140.53	30.73	9	0	20	19	371	20	0	15
14	23	Hardik Pan	KKR	2013	15.12	114.15	15.53	14	0	11	18	121	3	0	32
15	96	Rohit Shar	KXIP	2019	36	123.36	0	12	3	36	12	396	15	0	0
16	67	Rohit Shar	KXIP	2018	32.4	125.58	0	1	1	17	6	162	6	0	0
17	0	Rohit Shar	KXIP	2011	0	0	0	0	0	0	0	0	0	0	0
18	54	Rohit Shar	KXIP	2014	27.54	128.93	0	13	2	26	15	303	7	0	0
19	55	Rohit Shar	KXIP	2015	29.23	125	0	8	1	37	17	380	5	0	0
20	73	Rohit Shar	KXIP	2012	33.16	130.92	0	4	3	29	13	398	17	0	0
21	0	Rohit Shar	KXIP	2013	0	0	0	0	0	0	0	0	0	0	0
22	0	Irfan Pathe	SRH	2015	0	0	0	0	0	0	0	0	0	0	0
23	84	MS Dhoni	CSK	2019	83.2	134.62	0	11	3	22	15	416	23	5	0
24	79	MS Dhoni	CSK	2018	75.83	150.66	0	11	3	24	16	455	30	3	0
25	70	MS Dhoni	CSK	2011	43.55	158.7	0	5	2	25	16	392	23	5	0
26	84	MS Dhoni	CSK	2016	83.2	134.62	0	11	3	22	15	416	23	5	0
27	57	MS Dhoni	CSK	2014	74.2	148.4	0	3	1	22	16	371	20	1	0

DASHBOARD


IPL Statistics Dashboard
Select Year of Season
(All)
Select Player Name
Virat Kohli
Select Statistics
Top Wickets
Batting Strike Rate
KKR 162.0
CSK 154.3
RCB 136.5
MI 134.9
DC 128.9
Virat Kohli
Player Name: Virat Kohli
Highest Runs
911
Average Fours
42.33
Average Sixes
16.58
Total Wickets
25
Player Wise Statistics
Deepak Cha.. Hardik Pan.. Ravindra Ja.. Shardul Tha.. Jasprit Bum..
Batting & Bowling Average
Years
Batting Ave.. Bowling Av..
Catches
Deepak Chahar 3
Hardik Pandya 55
Irfan Pathan 0
Jasprit Bumrah 0
MS Dhoni 99
Ravichandran Ashwin 9
Ravindra Jadeja 51
Rohit Sharma 38
Shardul Thakur 9
Shreyas Iyer 10
Surya Kumar Yadav 6
Virat Kohli 108
No of Wickets
Fours & Sixes Average
Years
Avg. Fours Avg. Sixes
Dashboard 1 Fours & Sixes Average Sheet 12 Average Fours Catches Sheet 11 Average Sixes Total Wickets Highest Runs Batting & Bowling Average Player Wise Statistics Batting Strike Rate - Nationality ... Player Image


IPL Statistics Dashboard
Select Year of Season
(All)
Select Player Name
Irfan Pathan
Select Statistics
Top Wickets
Batting Strike Rate
KKR 162.0
CSK 154.3
RCB 136.5
MI 134.9
DC 128.9
Irfan Pathan
Highest Runs
0
Average Fours
0
Average Sixes
0
Total Wickets
0
Player Wise Statistics
Deepak Cha.. Hardik Pan.. Ravindra Ja.. Shardul Tha.. Jasprit Bum..
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Rohit Sharma 38
Shardul Thakur 9
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No of Wickets
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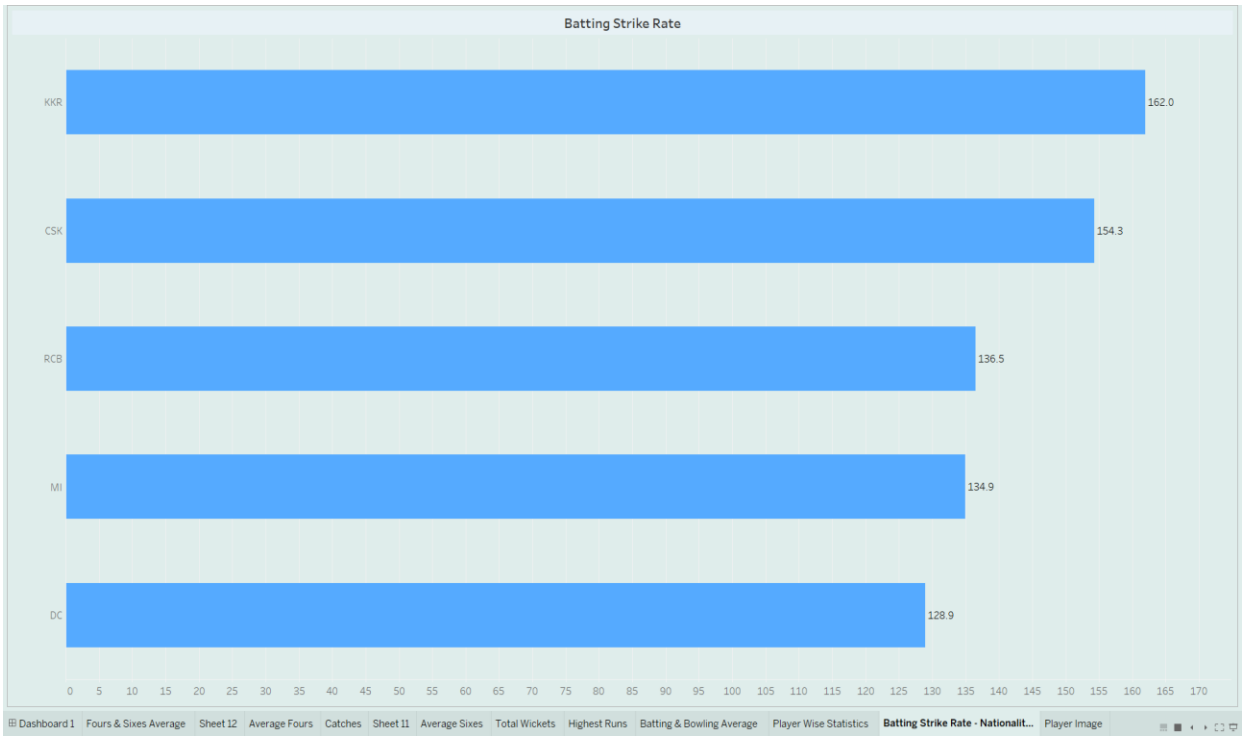
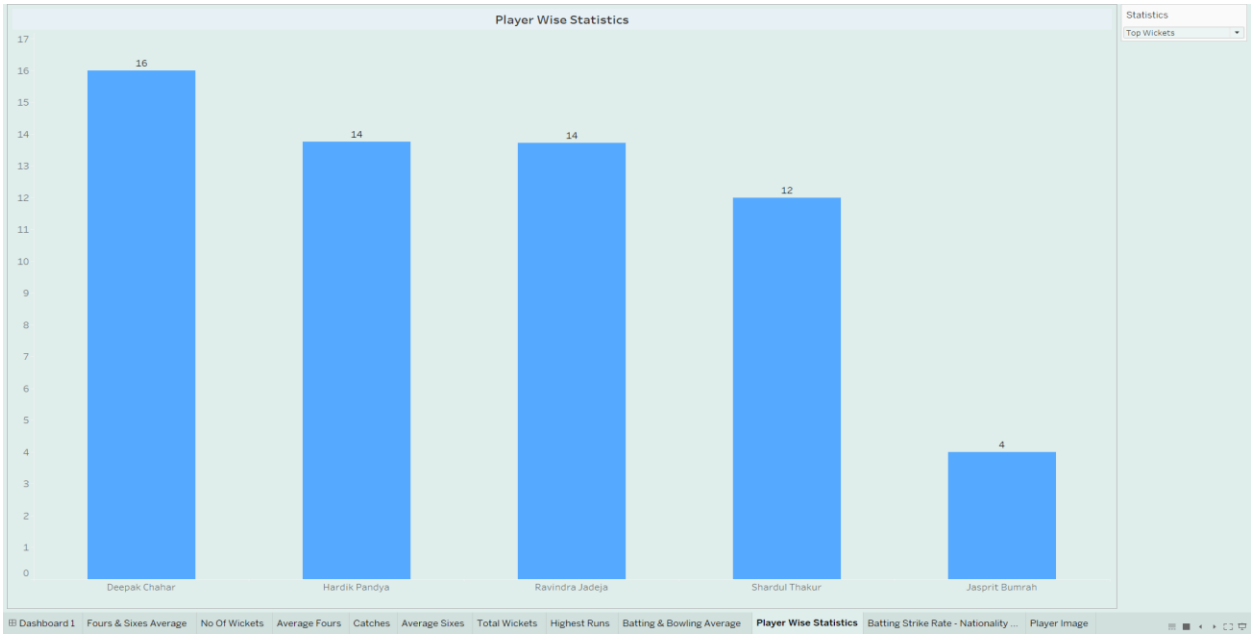
Years
Avg. Fours Avg. Sixes
Dashboard 1 Fours & Sixes Average Sheet 12 Average Fours Catches Sheet 11 Average Sixes Total Wickets Highest Runs Batting & Bowling Average Player Wise Statistics Batting Strike Rate - Nationality ... Player Image

Sheet 1: Batting Strike Rate



Sheet 2: Player Wise Statistics



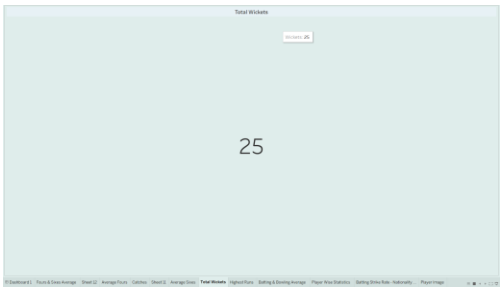
Sheet 3: Player Image

Sheet 4: Highest Runs

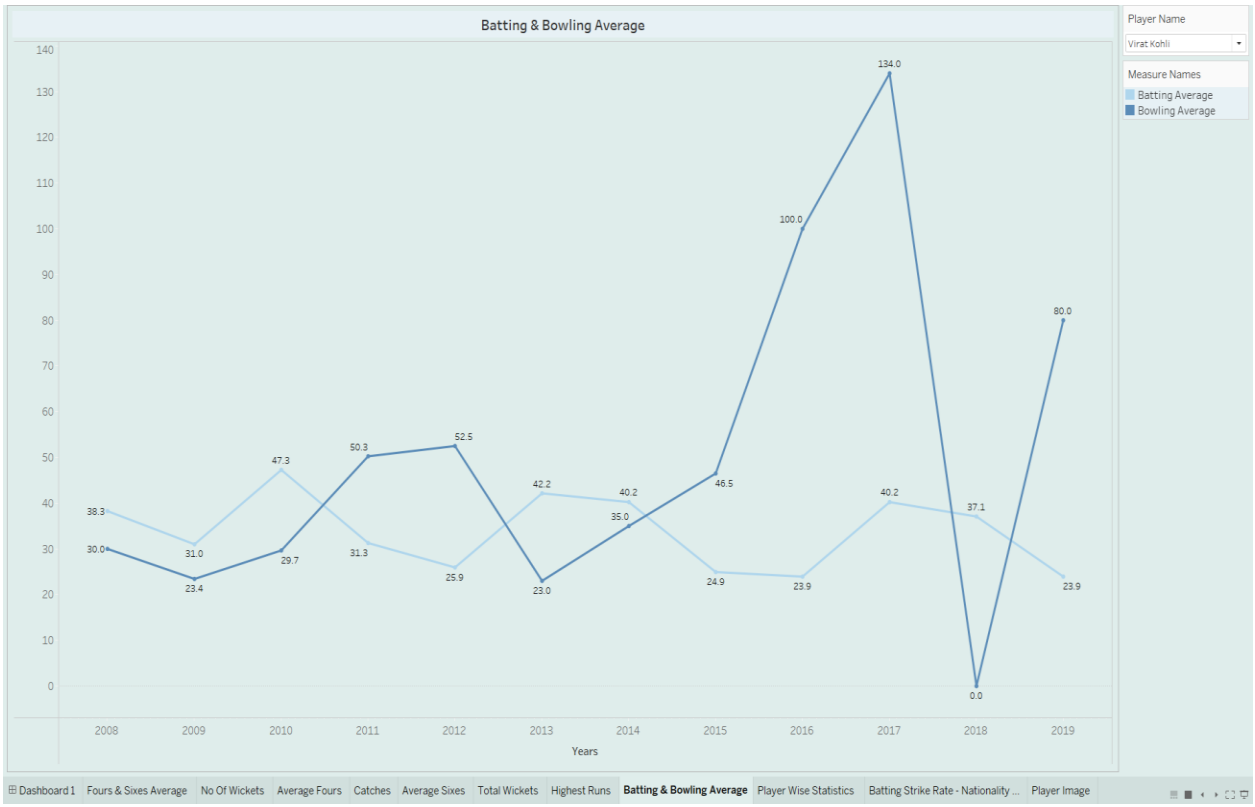
Sheet 5: Average Fours

Sheet 6: Average Sixes

Sheet 7: Total Wickets



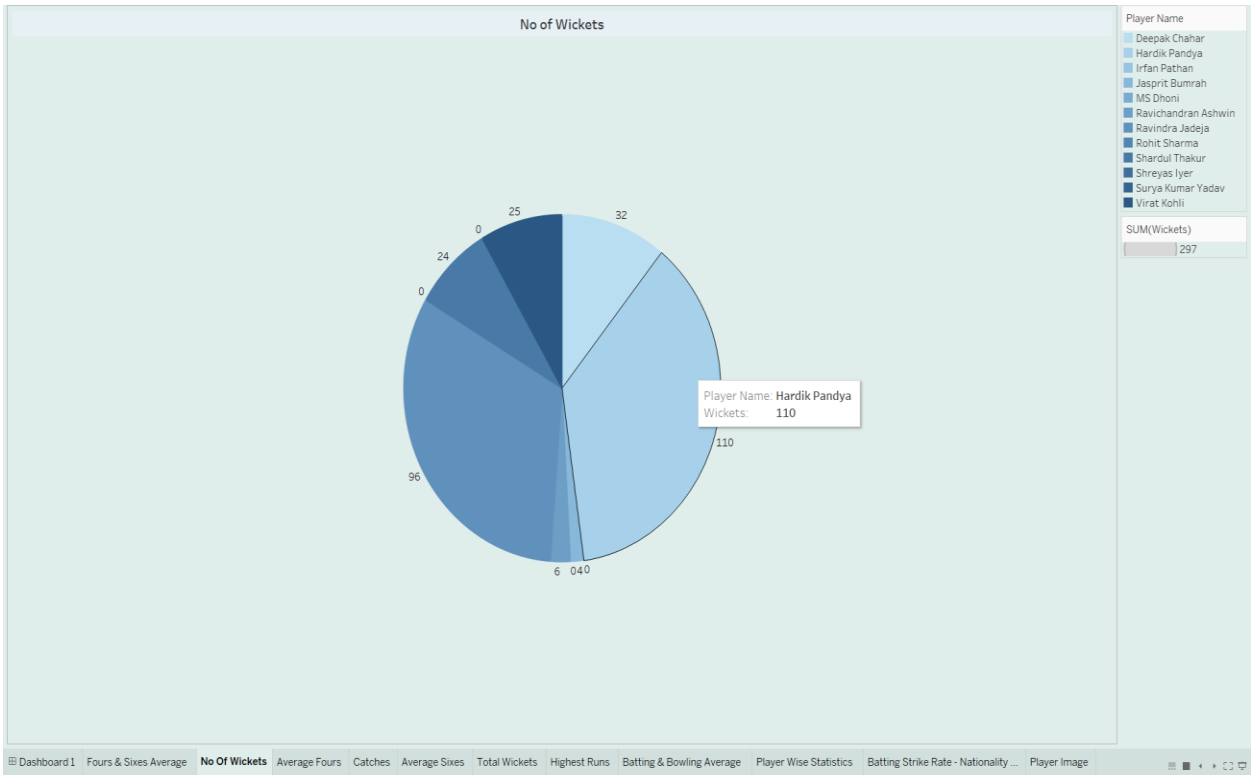
Sheet 8: Batting & Bowling Average:



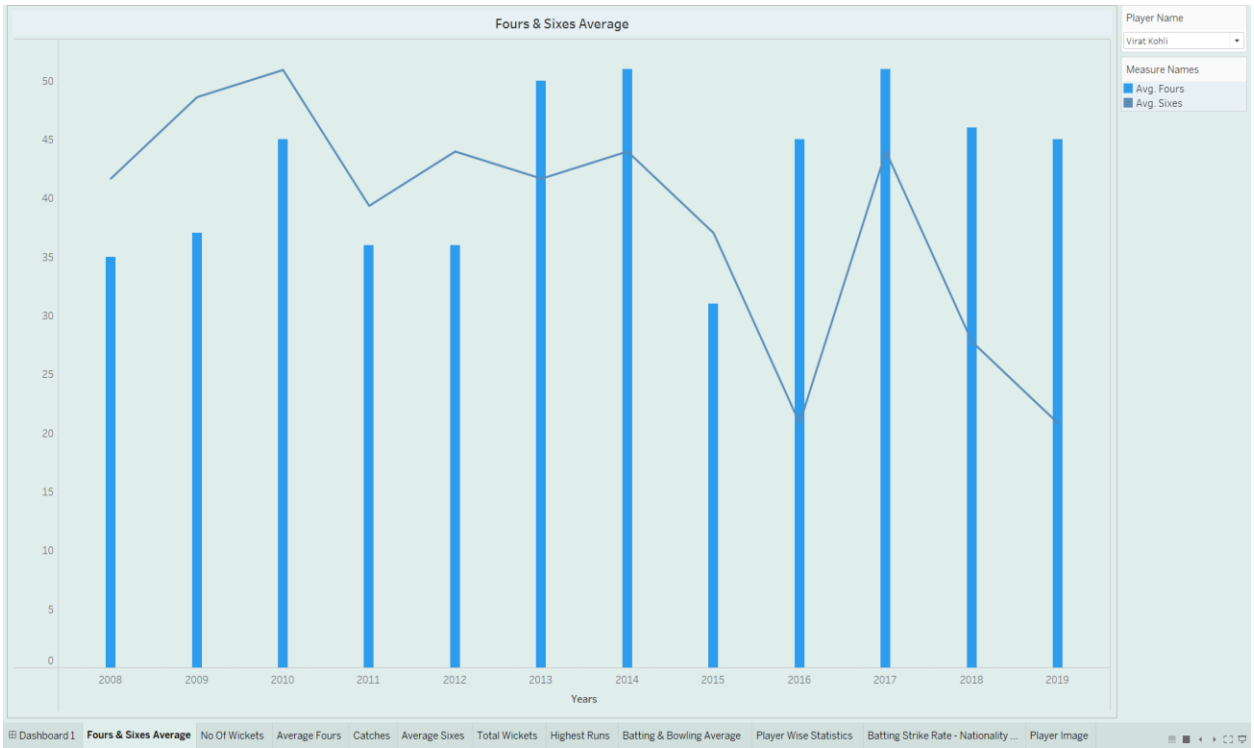
Sheet 9: Catches:

Catches	
Deepak Chahar	3
Hardik Pandya	55
Irfan Pathan	0
Jasprit Bumrah	0
MS Dhoni	99
Ravichandran Ashwin	9
Ravindra Jadeja	51
Rohit Sharma	38
Shardul Thakur	9
Shreyas Iyer	10
Surya Kumar Yadav	6
Virat Kohli	108

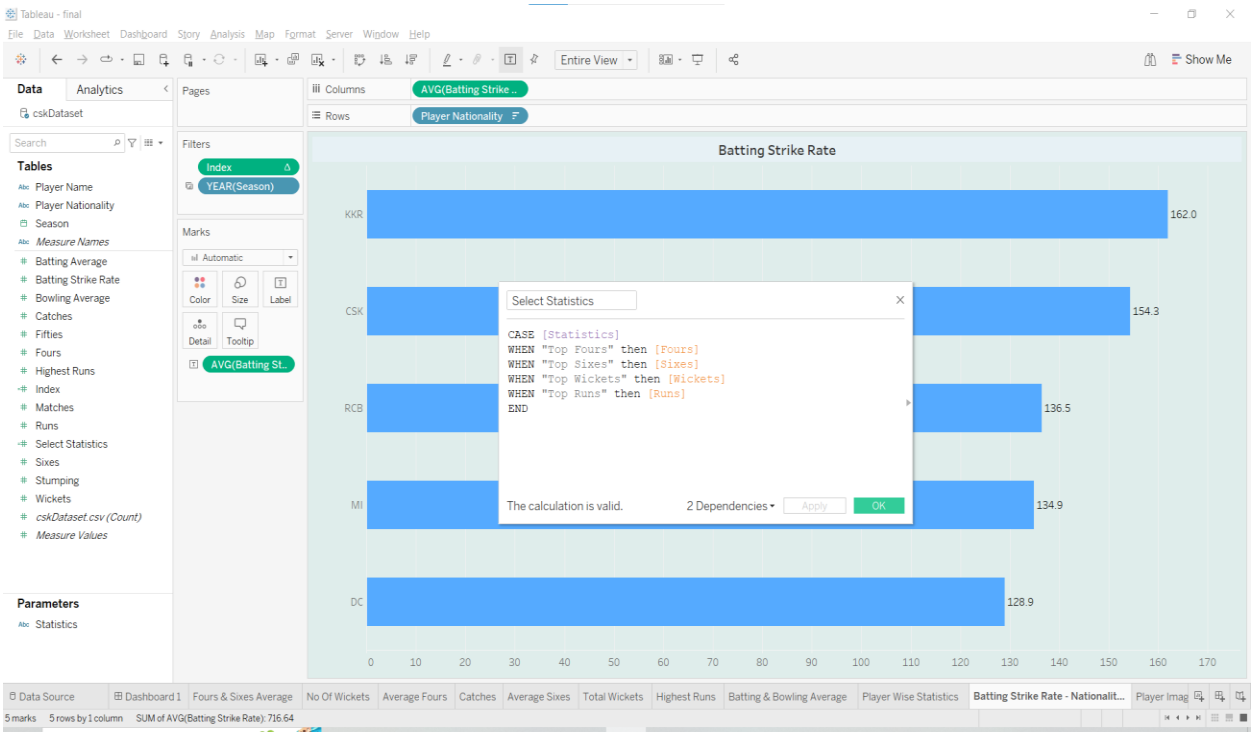
Sheet 10: No of Wickets:

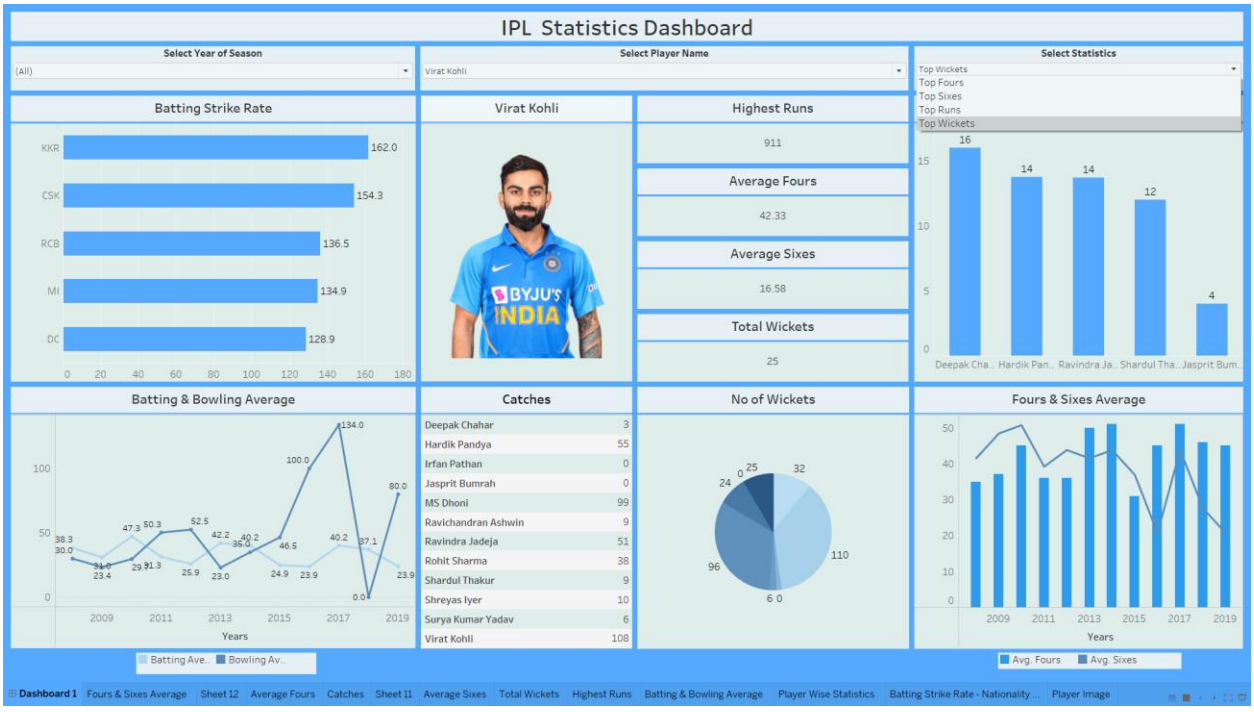


Sheet 11: Fours & Sixes Average:

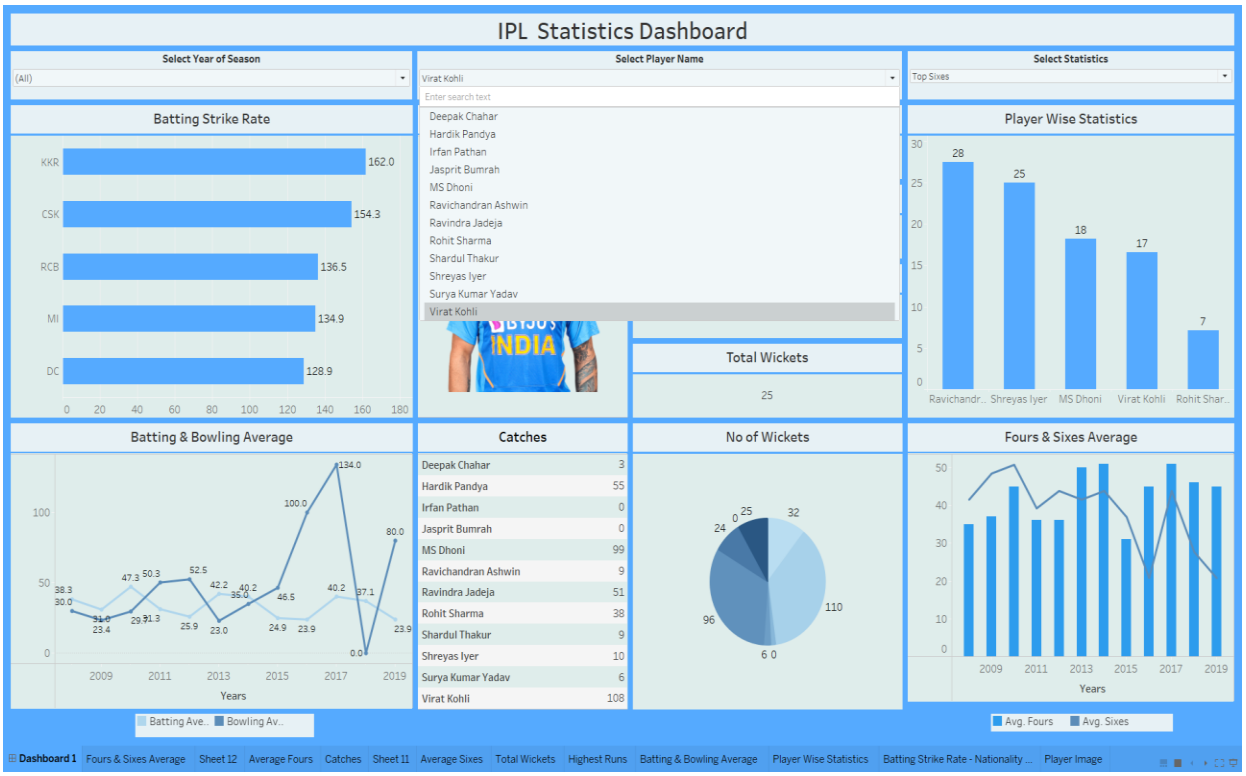


Filter the Calculations:






IPL Statistics Dashboard
Select Year of Season
(All)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
Select Player Name
Virat Kohli
Select Statistics
Top Wickets
Virat Kohli
Highest Runs
911
Average Fours
42.33
Average Sixes
16.58
Total Wickets
25
Player Wise Statistics
16
14
14
12
4
Deepak Cha..
Hardik Pan..
Ravindra Ja..
Shardul Tha..
Jasprit Bum..
Batting & Bowling Average
Years
Batting Ave..
Bowling Av..
Catches
Deepak Chahar 3
Hardik Pandya 55
Irfan Pathan 0
Jasprit Bumrah 0
MS Dhoni 99
Ravichandran Ashwin 9
Ravindra Jadeja 51
Rohit Sharma 38
Shardul Thakur 9
Shreyas Iyer 10
Surya Kumar Yadav 6
Virat Kohli 108
No of Wickets
Fours & Sixes Average
Years
Avg. Fours
Avg. Sixes
Dashboard 1
Fours & Sixes Average
Sheet 12
Average Fours
Catches
Sheet 11
Average Sixes
Total Wickets
Highest Runs
Batting & Bowling Average
Player Wise Statistics
Batting Strike Rate - Nationality ...
Player Image


IPL Statistics Dashboard
Select Year of Season
(All)
Select Player Name
Virat Kohli
Deepak Chahar
Hardik Pandya
Irfan Pathan
Jasprit Bumrah
MS Dhoni
Ravichandran Ashwin
Ravindra Jadeja
Rohit Sharma
Shardul Thakur
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Select Statistics
Top Sixes
Batting Strike Rate
KKR 162.0
CSK 154.3
RCB 136.5
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Player Wise Statistics
28
25
18
17
7
Ravichandr..
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Virat Kohli
Rohit Shar..
Total Wickets
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Batting & Bowling Average
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Deepak Chahar 3
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Fours & Sixes Average
Years
Avg. Fours
Avg. Sixes
Dashboard 1
Fours & Sixes Average
Sheet 12
Average Fours
Catches
Sheet 11
Average Sixes
Total Wickets
Highest Runs
Batting & Bowling Average
Player Wise Statistics
Batting Strike Rate - Nationality ...
Player Image

Queries on Dataset:

Head()

```
> head(df)
  Highest    PlayerName TeamName Season BattingAverage BattingStrikeRate BowlingAverage Catches
1     100  Shreyas Iyer       MI   2018          43.00            149.75            0.0       2
2      57  Shreyas Iyer       MI   2019          23.50             93.06            0.0       6
3     100  Shreyas Iyer       MI   2018          43.00            149.75            0.0       2
4       7 Deepak Chahar      RPS   2019           3.50             77.77           21.9       2
5      39 Deepak Chahar      RPS   2018          16.66            172.41           27.8       1
6      27 Hardik Pandya      KKR   2019          16.00            121.21           30.0       5
  Fifties Fours Matches Runs Sixes Stumping Wickets
1       3    53      16  250    34        0       0
2       1    20      17  282     7        0       0
3       3    53      16  602    34        0       0
4       0     1      17    7     0        0      22
5       0     1      12   50     4        0      10
6       0     6      12   80     3        0      11
```

Q1: Summary of dataset:

```
> summary(df)
    Highest        PlayerName          TeamName             Season     BattingAverage
 Min.   :  0.00   Length:59          Length:59          Min.   :2008   Min.   : 0.00
 1st Qu.: 29.00   Class :character   Class :character   1st Qu.:2012   1st Qu.:16.33
 Median : 57.00   Mode  :character   Mode  :character   Median :2015   Median :29.23
 Mean   : 53.08                                        Mean   :2015   Mean   :28.98
 3rd Qu.: 73.00                                        3rd Qu.:2018   3rd Qu.:39.94
 Max.   :117.00                                        Max.   :2019   Max.   :83.20
 BattingStrikeRate BowlingAverage      Catches          Fifties          Fours          Matches
 Min.   :  0.0     Min.   :  0.00   Min.   : 0.000   Min.   :0.000   Min.   : 0.00   Min.   : 0.00
 1st Qu.:122.0     1st Qu.:  0.00   1st Qu.: 3.000   1st Qu.:0.000   1st Qu.: 7.00   1st Qu.:13.00
 Median :133.5     Median : 16.38   Median : 6.000   Median :1.000   Median :22.00   Median :16.00
 Mean   :130.4     Mean   : 19.64   Mean   : 6.576   Mean   :1.525   Mean   :22.61   Mean   :13.83
 3rd Qu.:148.9     3rd Qu.: 29.83   3rd Qu.:10.500   3rd Qu.:3.000   3rd Qu.:36.00   3rd Qu.:17.00
 Max.   :300.0     Max.   :134.00   Max.   :15.000   Max.   :5.000   Max.   :53.00   Max.   :19.00
      Runs           Sixes          Stumping        Wickets
 Min.   :  0.0   Min.   : 0.00   Min.   :0.000   Min.   : 0.000
 1st Qu.:107.0   1st Qu.: 4.00   1st Qu.:0.000   1st Qu.: 0.000
 Median :332.0   Median : 9.00   Median :0.000   Median : 0.000
 Mean   :271.2   Mean   :11.68   Mean   :0.661   Mean   : 5.034
 3rd Qu.:415.0   3rd Qu.:19.00   3rd Qu.:0.000   3rd Qu.: 9.000
 Max.   :602.0   Max.   :35.00   Max.   :6.000   Max.   :32.000
```

Q2: Seasons played by Players, Team:

```
> ans<-factor(df$PlayerName)
> levels(ans)
 [1] "Deepak Chahar"       "Hardik Pandya"       "Irfan Pathan"        "Jasprit Bumrah"
 [5] "MS Dhoni"            "Ravichandran Ashwin" "Ravindra Jadeja"     "Rohit Sharma"
 [9] "Shardul Thakur"      "Shreyas Iyer"        "Surya Kumar Yadav"   "Virat Kohli"
> table(ans)
ans
      Deepak Chahar       Hardik Pandya        Irfan Pathan      Jasprit Bumrah            MS Dhoni
                  2                   8                   1                   1                  12
Ravichandran Ashwin     Ravindra Jadeja        Rohit Sharma      Shardul Thakur        Shreyas Iyer
                  2                   7                   7                   2                   3
  Surya Kumar Yadav         Virat Kohli
                  2                  12
>
```

```
> ans<-factor(df$TeamName)
> levels(ans)
[1] "CSK"  "DC"   "KKR"  "KXIP" "MI"   "RCB"  "RPS"  "RR"   "SRH"
> table(ans)
ans
 CSK   DC  KKR KXIP   MI  RCB  RPS   RR  SRH
  14    7    8    7    5   12    2    3    1
>
```

Q3 No. of Runs on the basis of Players:

```
> df %>% group_by(PlayerName) %>% summarise(sum(Runs))
# A tibble: 12 × 2
   PlayerName          `sum(Runs)`
   <chr>                     <int>
 1 Deepak Chahar                57
 2 Hardik Pandya               937
 3 Irfan Pathan                  0
 4 Jasprit Bumrah                0
 5 MS Dhoni                   4646
 6 Ravichandran Ashwin         953
 7 Ravindra Jadeja            1066
 8 Rohit Sharma               1639
 9 Shardul Thakur               29
10 Shreyas Iyer               1134
11 Surya Kumar Yadav           108
12 Virat Kohli                5433
>
```

Q4 No. of Fours and Sixes on the basis of Teams:

```
> df %>% group_by(TeamName) %>% summarise(sum(Fours))
# A tibble: 9 × 2
  TeamName `sum(Fours)`
  <chr>           <int>
1 CSK               317
2 DC                 73
3 KKR                69
4 KXIP              145
5 MI                212
6 RCB               508
7 RPS                 2
8 RR                  8
9 SRH                 0
> df %>% group_by(TeamName) %>% summarise(sum(Sixes))
# A tibble: 9 × 2
  TeamName `sum(Sixes)`
  <chr>           <int>
1 CSK               220
2 DC                 37
3 KKR                44
4 KXIP               50
5 MI                130
6 RCB               199
7 RPS                 4
8 RR                  5
9 SRH                 0
>
```

Q5 No. of catches and stumpings on the basis of Seasons:

```
> df %>% group_by(Season) %>% summarise(sum(Catches)+sum(Stumping))
# A tibble: 12 × 2
   Season `sum(Catches) + sum(Stumping)`
    <int>                          <int>
 1   2008                             16
 2   2009                             15
 3   2010                             21
 4   2011                             19
 5   2012                             40
 6   2013                             53
 7   2014                             32
 8   2015                             56
 9   2016                             23
10   2017                             22
11   2018                             61
12   2019                             69
> 
```

Q6: Name the player, of which team in which season whose average of Batting, Bowling, Fours and Sixes is Zero:

```
> ans<-subset(df,BattingAverage==0 & BowlingAverage==0 & Fours==0 & Sixes==0,select=c(PlayerName,TeamName,S
eason))
> ans
          PlayerName TeamName Season
16      Rohit Sharma     KXIP   2011
20      Rohit Sharma     KXIP   2013
21      Irfan Pathan      SRH   2015
41 Surya Kumar Yadav       RR   2019
>
```