

## Example Case for Sports Analytics

**Time:** International T20 from 2005 to 2017

**Player:** Shakib Al Hasan

**Role:** Batting (Striker)

**Data:** Bally by ball information on Striker, Non-Striker, Over Number, Ball Number, Bowler, Team, Run Scored and Type of Dismissal.

**Source:** <https://www.kaggle.com/imrankhan17/t20matches>

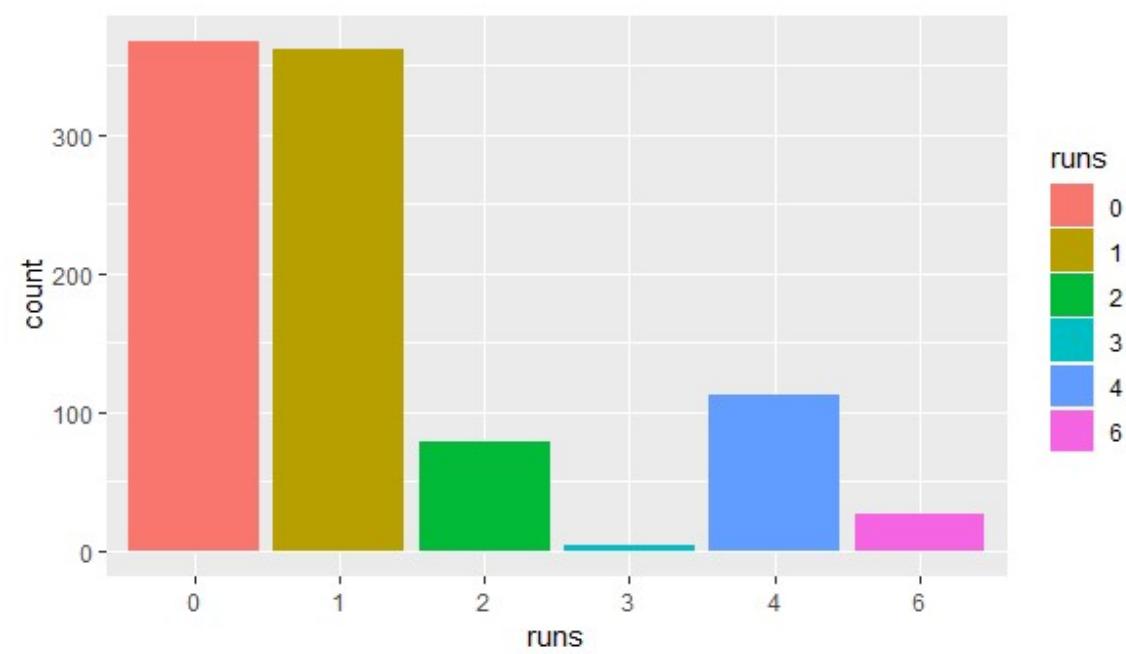
**Q1. Which teams and in what percentage did he bat against?**

Team	Percentage
Pakistan	24.45
Sri Lanka	12.86
Australia	12.75
Zimbabwe	12.33
New Zealand	7.48
South Africa	6.53
India	5.48
Ireland	4.21
Hong Kong	2.85
West Indies	2.85
Netherlands	2.21
Nepal	1.90
Afghanistan	1.48
United Arab Emirates	1.48
Oman	1.16

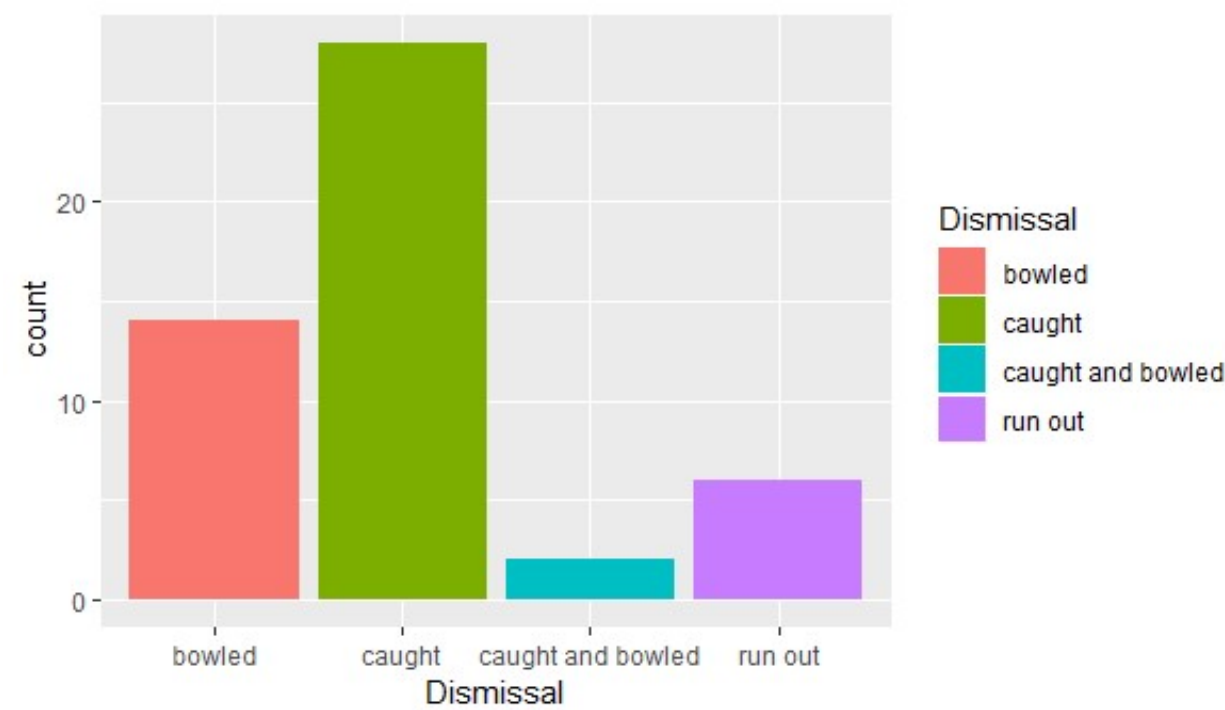
**Q2. Who are his top ten most frequent partner?**

Non_Striker	Percentage
Mushfiqur Rahim	19.5%
Sabbir Rahman	17.7%
Tamim Iqbal	12.8%
Mahmudullah	9.6%
Anamul Haque	5.8%
Mohammad Ashraful	5.5%
Mosaddek Hossain	4.6%
Shamsur Rahman	4.6%
Nasir Hossain	4.3%
Aftab Ahmed	3.3%

Q3. What runs did he score most of the time?



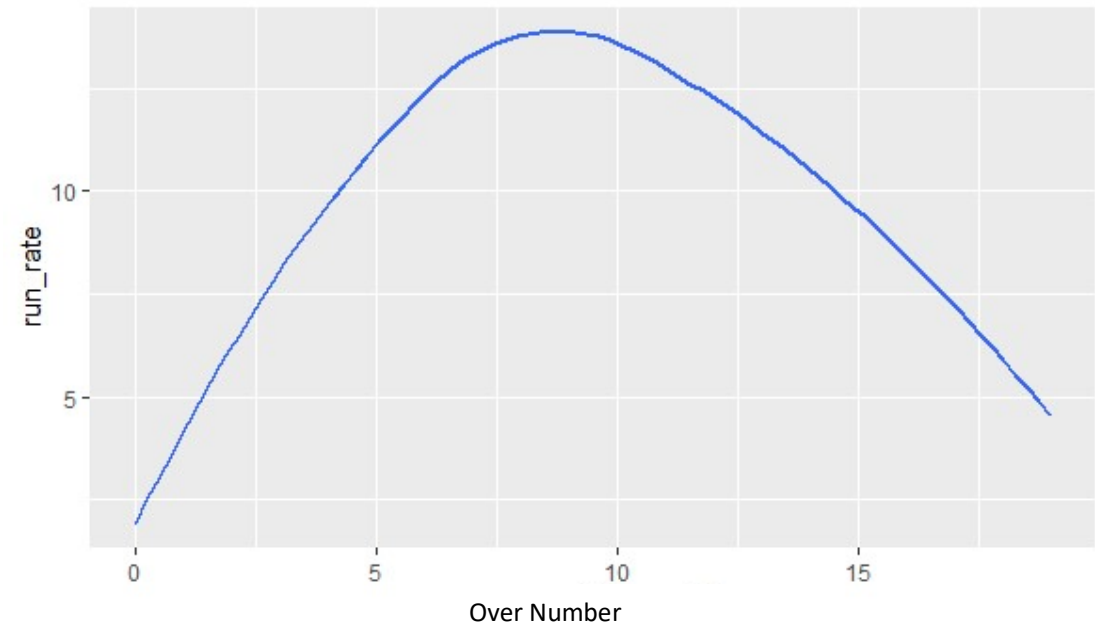
Q4. How did he get out?



**Q5. Which way Shakib got out against other countries?**

Team	Bowled	Caught	Caught & Bowled	Run Out
Australia	0	4	0	0
Hong Kong	0	1	0	0
India	1	3	0	1
Ireland	1	1	0	0
Netherlands	1	1	1	0
New Zealand	1	5	0	0
Pakistan	2	4	1	2
South Africa	0	2	0	2
Sri Lanka	3	3	0	1
United Arab Emirates	1	0	0	0
West Indies	3	1	0	0
Zimbabwe	1	3	0	0

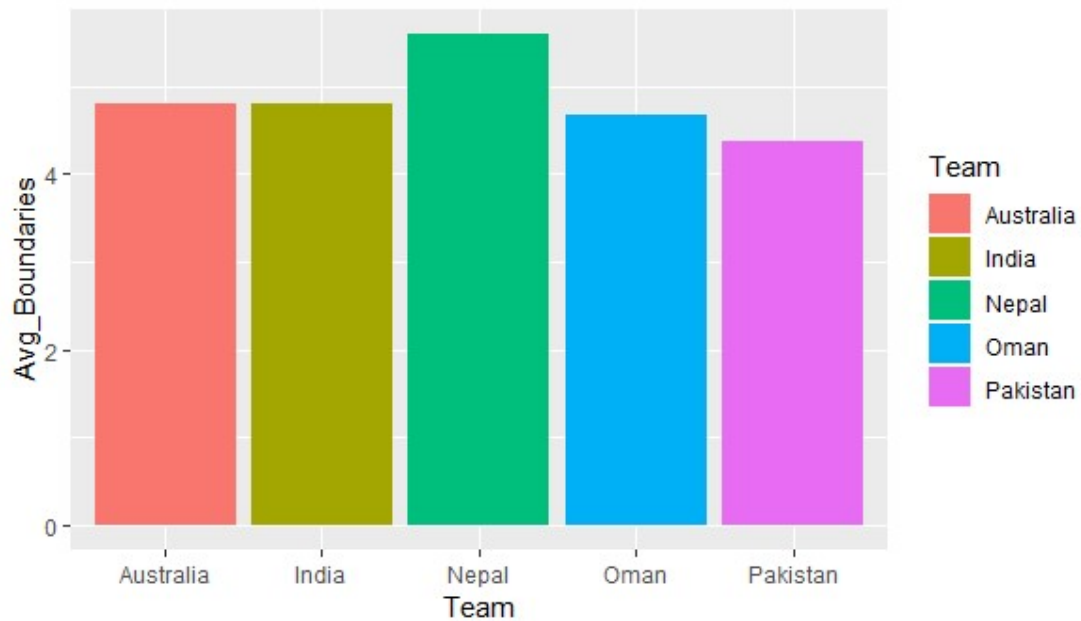
**Q6. Average scores per over for Shakib?**



**Q7. Which Bowlers did he hit most of the 4's and 6's?**

Bowler	4's and 6's
KMDN Kulasekara	7
Umar Gul	7
Saeed Ajmal	6
Shahid Afridi	6
BV Vitori	4
GJ Maxwell	4
Sohail Tanvir	4
SW Masakadza	4
T Panyangara	4
TL Chatara	4
Wahab Riaz	4

**Q8. Top 5 countries against whom Shakib had the highest average number of 4's and 6's:**



**Q9. What is Shakib's average score per country he has faced?**

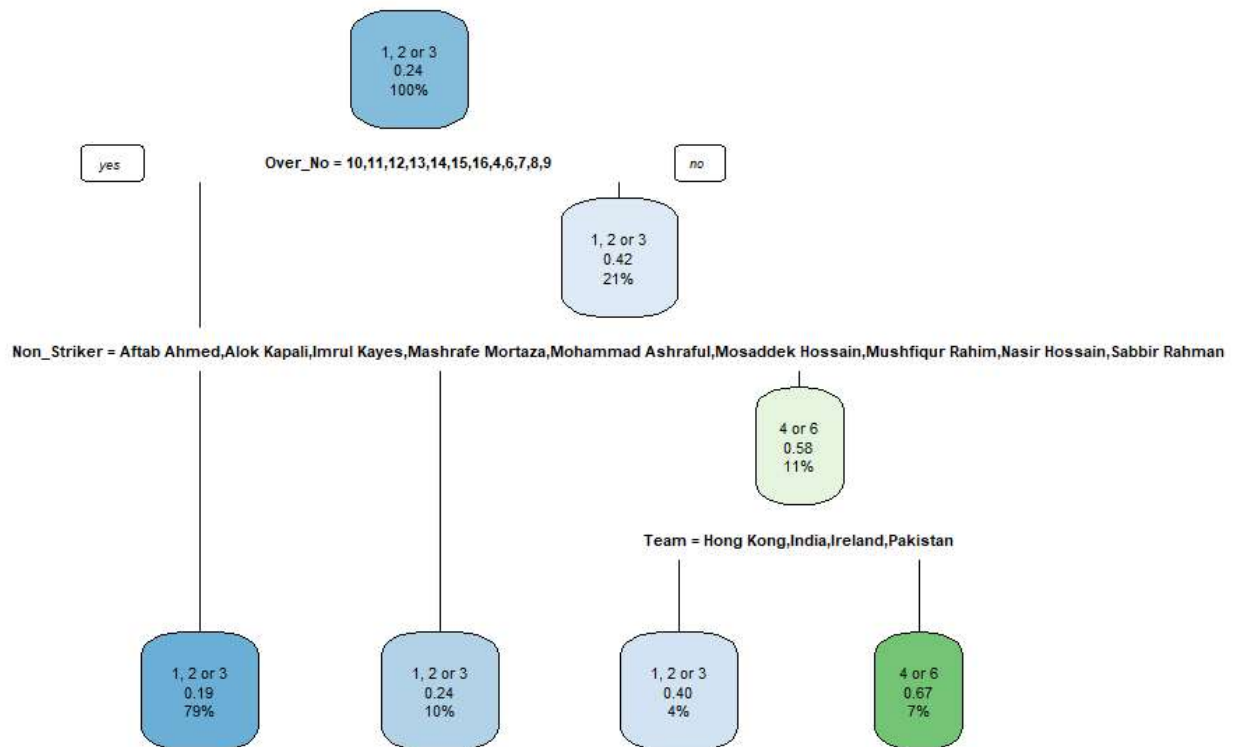
Team	Appearance	Average Runs
Nepal	1	37.0
Australia	4	35.8
Hong Kong	1	34.0
Pakistan	9	32.4
Ireland	2	32.0
Zimbabwe	6	26.5
Sri Lanka	6	22.8
Oman	1	17.0
South Africa	4	14.3
United Arab Emirates	1	13.0
New Zealand	6	12.0
India	5	11.0
Afghanistan	1	10.0
West Indies	4	7.5
Netherlands	3	5.7

**Q10. Against which bowlers did Shakib perform the best:**

Bowler	Balls faced	Total Runs	Run rate
Wahab Riaz	14	25	10.71
KMDN Kulasekara	20	34	10.20
Umar Gul	23	39	10.17
GJ Maxwell	16	27	10.13
T Panyangara	12	20	10.00
DE Bollinger	13	21	9.69
MJ Santner	13	21	9.69
HH Pandya	16	22	8.25
S Prasanna	14	18	7.71
Saeed Ajmal	42	52	7.43
BV Vitori	26	32	7.38
Mohammad Hafeez	24	28	7.00
NLTC Perera	12	14	7.00
Sohail Tanvir	19	21	6.63
Shahid Afridi	51	56	6.59

## Building a prediction model of Shakib's Runs

This is just a simple prediction model based on very small amount of data, and this model is more to work as an example of what can be done using sports data, rather than predicting Shakib's actual batting pattern.



**Explanation:** If he is batting in 4, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15 and 16, then is more likely to score in 1s, 2s and 3s. If he is in any other overs, then depends on who is his non-striker. If his non-striker is Aftab, Alok, Imrul, Mashrafe, Ashraful, Mosaddek, Mushfiqur, Nasir and Sabbir, then he is again likely to score either 1, 2 or 3 runs. If there is someone else as a non-striker, then depends on the team. If the team is HK, India, Ireland and Pakistan, again he is like to score in 1s, 2s and 3s. Or else, he will be more likely to hit a 4 or a 6.