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Virat Kohli Batting Performance Analysis

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Overview

This project provides a detailed analysis of Virat Kohli's batting performances across two major cricket formats: red-ball (Test) and white-ball (ODI and T20). The project highlights Kohli's key batting statistics, milestones, and performances under various conditions.

Through interactive and visually appealing dashboards, users can explore his consistency, adaptability, and contributions to the game, offering insights into how he has excelled as a cricketer across formats.



Introduction

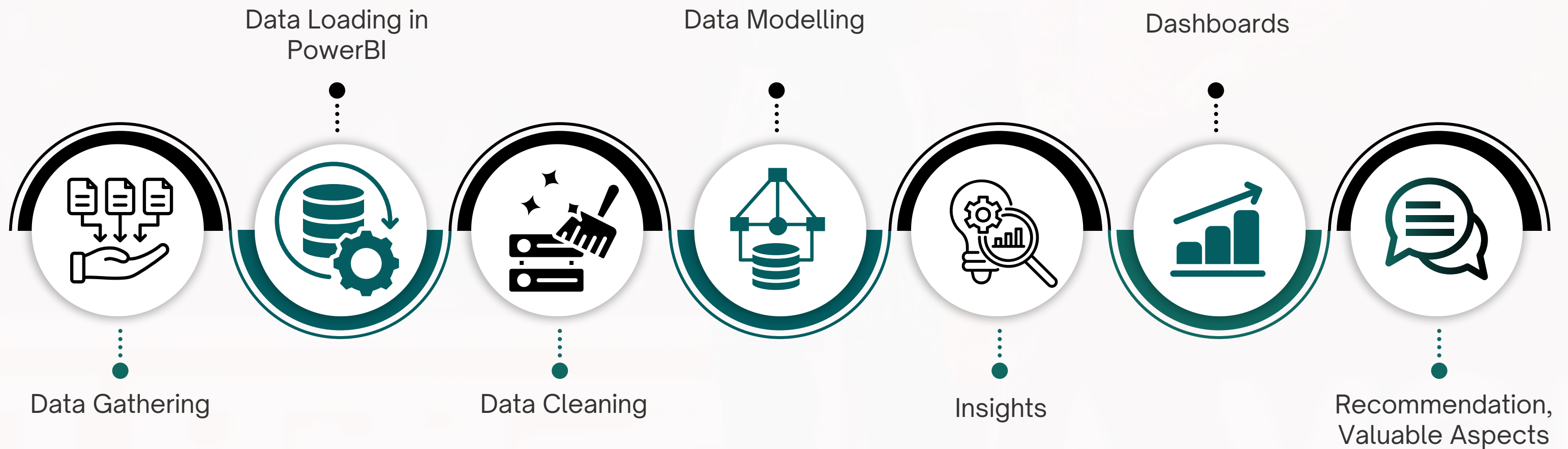
Virat Kohli, one of the most celebrated cricketers of the modern era, has made significant contributions to the game in both red-ball (Test) and white-ball (ODI and T20) cricket. Known for his passion, technique, and consistency, Kohli has set benchmarks across formats, becoming a role model for aspiring cricketers worldwide.



Objective

- To analyze and compare Virat Kohli's batting performances in red-ball and white-ball cricket.
- To identify patterns and trends in his performance, including runs scored, average, strike rate, and centuries across formats.
- To evaluate his adaptability to different playing conditions, formats, and roles within the team.
- To provide interactive visualizations that highlight key milestones.

Project Sequence



Data Gathering

Data has been collected from howstat.com using web scraping.

Data Loading

Data is imported through a csv file into PowerBI.

There are 3 tables imported:

- kohli_odi1
- kohli_t20i
- kohli_test1

Match	Innings	Date	M/Inns	Position	VS	Ground	How Dismissed	Runs	BF	SR	runs1	bf1	Avg
11	10	Monday, November 2, 2009	2nd	3	Australia	PunjabBowled Cricket Association IS Bindra Stadium	Caught	10	16	62.5	296	426	
17	15	Thursday, January 7, 2010	2nd	3	Bangladesh	Shere Bangla National Stadium	Caught	91	102	89.22	584	738	44.
23	20	Saturday, February 27, 2010	2nd	3	South Africa	Narendra Modi Stadium	Caught	57	71	80.28	847	1026	52.
25	22	Sunday, May 30, 2010	2nd	3	Sri Lanka	Queens Sports CluBowled	Caught	82	92	89.13	929	1118	51.
32	29	Monday, August 16, 2010	2nd	3	Sri Lanka	Rangiri DamBowledulla International Stadium	Caught	0	3	0	1082	1342	43.
34	31	Saturday, August 28, 2010	2nd	3	Sri Lanka	Rangiri DamBowledulla International Stadium	Caught	37	57	64.91	1127	1415	41.
35	32	Wednesday, October 20, 2010	2nd	3	Australia	Dr YS Rajasekhara Reddy Cricket Stadium	Caught	118	121	97.52	1245	1536	44.
37	34	Wednesday, December 1, 2010	2nd	3	New Zealand	Sawai Mansingh Stadium	Caught	64	73	87.67	1414	1713	47.
39	36	Tuesday, December 7, 2010	2nd	3	New Zealand	M Chinnaswamy Stadium	Caught	0	2	0	1477	1785	47.
40	37	Friday, December 10, 2010	2nd	3	New Zealand	MA ChidambBowledaram Stadium	Caught	2	8	25	1479	1793	46.
41	38	Wednesday, January 12, 2011	2nd	3	South Africa	Kingsmead	Caught	54	70	77.14	1533	1863	46.
43	40	Tuesday, January 18, 2011	2nd	3	South Africa	Newlands	Caught	28	41	68.29	1583	1938	45.
45	42	Sunday, January 23, 2011	2nd	3	South Africa	SuperSport Park	Caught	2	6	33.33	1672	2036	46.
55	52	Monday, June 6, 2011	2nd	3	West Indies	Queen's Park Oval	Caught	2	8	25	1956	2387	43.
56	53	Wednesday, June 8, 2011	2nd	3	West Indies	Queen's Park Oval	Caught	81	103	78.64	2037	2490	44.
75	72	Sunday, February 5, 2012	2nd	3	Australia	MelBowledourne Cricket Ground	Caught	31	34	91.18	2891	3441	46.
77	74	Sunday, February 12, 2012	2nd	3	Australia	Adelaide Oval	Caught	18	28	64.29	2986	3563	46.
79	76	Sunday, February 19, 2012	2nd	3	Australia	BrisBowledane Cricket Ground	Caught	12	25	48	3013	3613	45.
85	82	Sunday, March 18, 2012	2nd	3	Pakistan	Shere Bangla National Stadium	Caught	183	148	123.65	3590	4159	50.
88	85	Saturday, July 28, 2012	2nd	3	Sri Lanka	R Premadasa Stadium	Caught	38	65	58.46	3735	4342	50.

tion	VS	Ground	How Dismissed	Runs	BF	SR	runs1	bf1	Avg	sr1	For
	West Indies	Queen's Park Oval	Caught	14	12	116.67	68	52	34	130.77	
	England	Eden Gardens	Caught	15	16	93.75	87	73	21.75	119.18	
	Australia	ANZ Stadium	Caught	22	21	104.76	109	94	21.8	115.96	
	Australia	Melbourne Cricket Ground	Caught	31	24	129.17	140	118	23.33	118.64	
	Sri Lanka	Pallekele International Cricket Stadium	Caught	68	48	141.67	208	166	29.71	125.3	
	Afghanistan	R Premadasa Stadium	Caught	50	39	128.21	328	246	36.44	133.33	
	England	R Premadasa Stadium	Caught	40	32	125	368	278	36.8	132.37	
	Australia	R Premadasa Stadium	Caught	15	13	115.38	383	291	34.82	131.62	
	Pakistan	R Premadasa Stadium	Not Out	78	61	127.87	461	352	41.91	130.97	
	South Africa	R Premadasa Stadium	Caught	2	6	33.33	463	358	38.58	129.33	
	England	Maharashtra Cricket Association Stadium	Bowled	21	17	123.53	484	375	37.23	129.07	
	England	Wankhede Stadium	LBW	38	20	190	522	395	37.29	132.15	
	Pakistan	M Chinnaswamy Stadium	Caught	9	11	81.82	531	406	35.4	130.79	

3rd	5	West Indies	Sabina Park	Caught	13	34	27.78	19	84	
1st	5	West Indies	Kensington Oval	Caught	0	2	0	19	66	
3rd	5	West Indies	Kensington Oval	Caught	27	107	25.23	46	173	
2nd	5	West Indies	Windsor Park	Caught	30	53	56.6	76	226	
4th	DNB	West Indies	Windsor Park	DNB	0	0	0	76	226	
2nd	6	West Indies	Wankhede Stadium	Caught	52	111	46.85	128	337	
4th	6	West Indies	Wankhede Stadium	Caught	63	114	55.26	191	451	
2nd	7	Australia	Melbourne Cricket Ground	Caught	11	21	52.38	202	472	
4th	6	Australia	Melbourne Cricket Ground	LBW	0	1	0	202	473	
1st	6	Australia	Sydney Cricket Ground	Caught	23	41	56.1	225	514	
3rd	6	Australia	Sydney Cricket Ground	LBW	9	24	37.5	234	538	
1st	6	Australia	WACA Ground	Caught	44	81	54.32	278	619	
3rd	6	Australia	WACA Ground	Caught	75	136	55.15	353	755	
2nd	6	Australia	Adelaide Oval	LBW	116	213	54.46	469	968	
4th	6	Australia	Adelaide Oval	Run Out	22	62	35.48	491	1030	
1st	5	New Zealand	Rajiv Gandhi International Stadium	Caught	58	107	54.21	549	1137	

Data Cleaning

During data cleaning, various transformations are applied to the loaded data to ensure its quality and consistency.

Columns that contains incorrect data replace with correct data.

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Data Modelling

In data modeling, the goal is to organize data for effective analysis and reporting, including establishing relationships between tables.

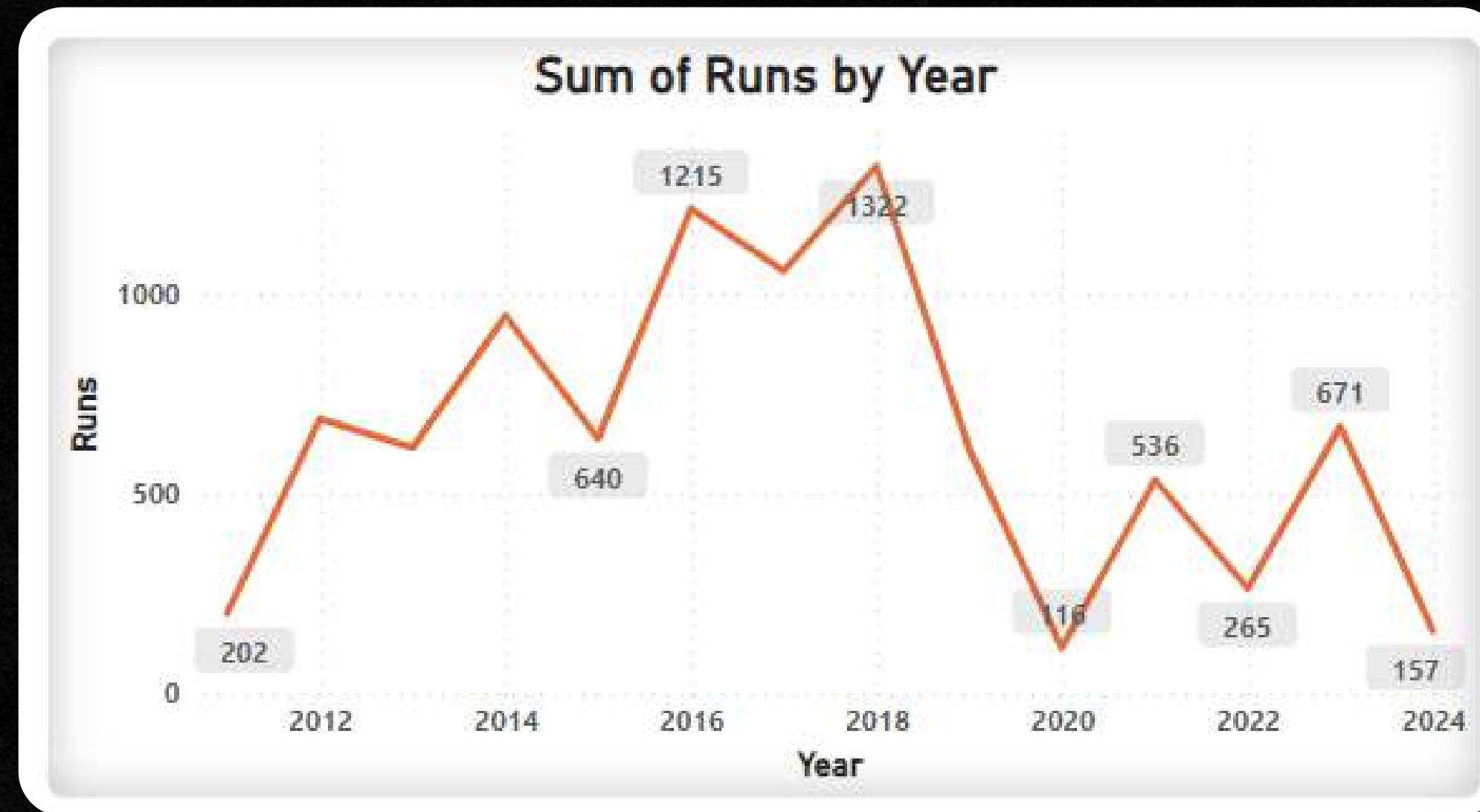
This project aims to build a one-to-many relationship between the “kohli_test1” and “kohli_odi1” tables and one-to-one relationship between “kohli_t20i” and “kohli_odi1” using match columns as keys.





Insights

(Test)

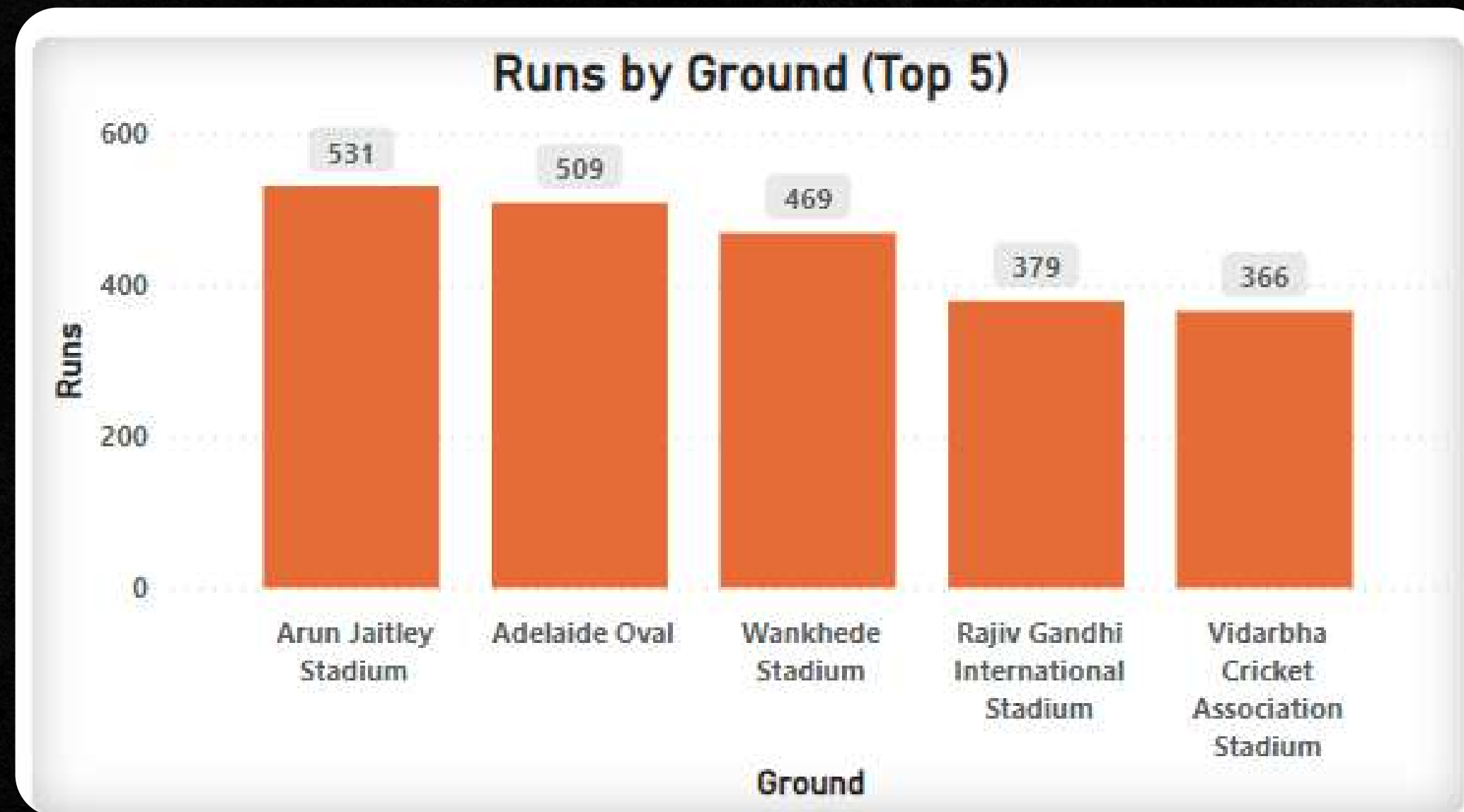


Insights

Sum of Runs trended down, resulting in a 22.28% decrease between 2011 and 2024.

Sql Query

```
SELECT Date, SUM(Runs) AS  
TotalRuns  
FROM test1  
GROUP BY Date  
ORDER BY Date ASC;
```

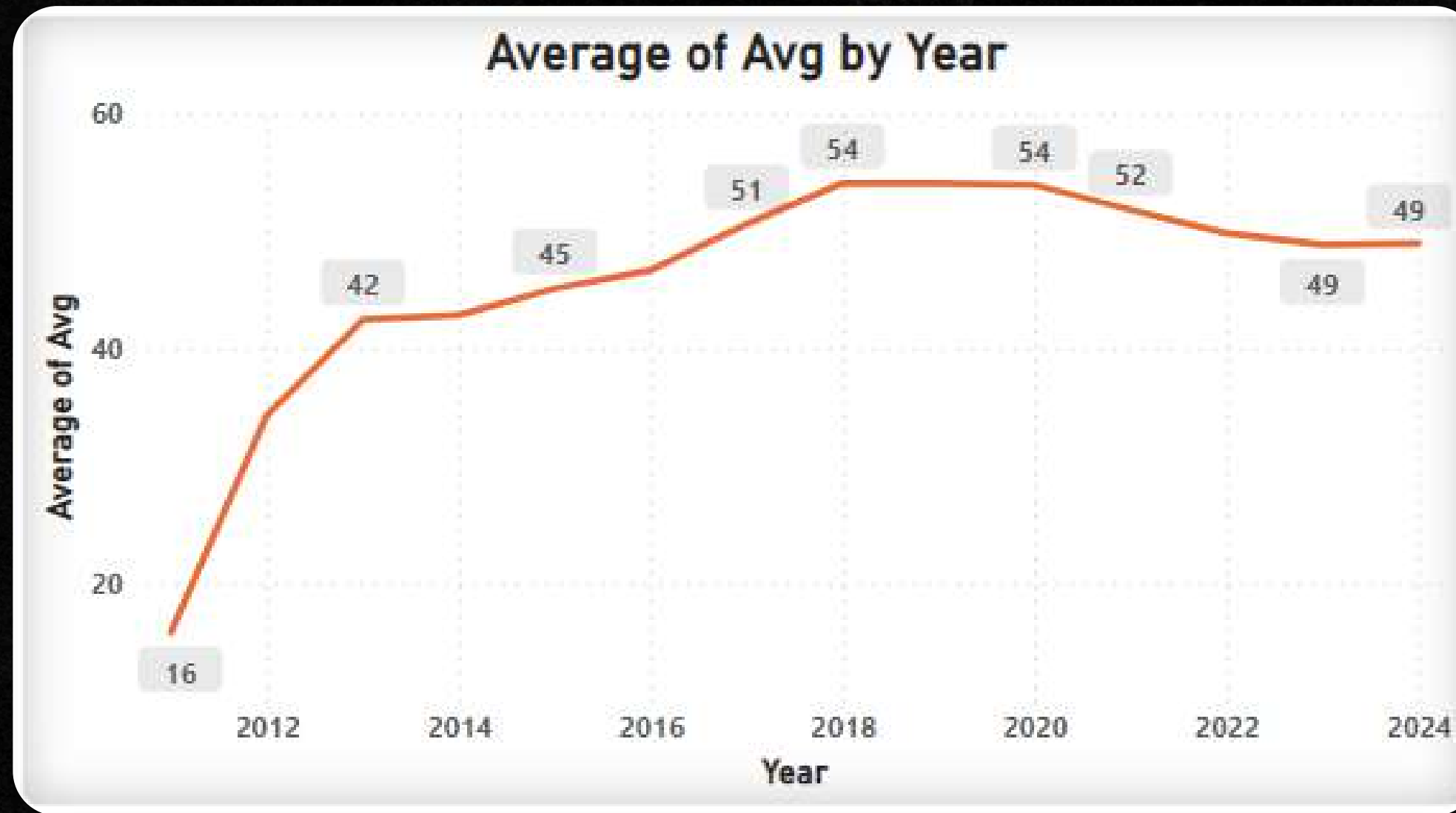



Insights

Arun Jaitley Stadium accounted for 23.56% of Sum of Runs.

Sql Query

```
SELECT Ground, SUM(Runs) AS  
Total_Runs  
FROM test1  
GROUP BY Ground  
ORDER BY Total_Runs desc LIMIT 5;
```

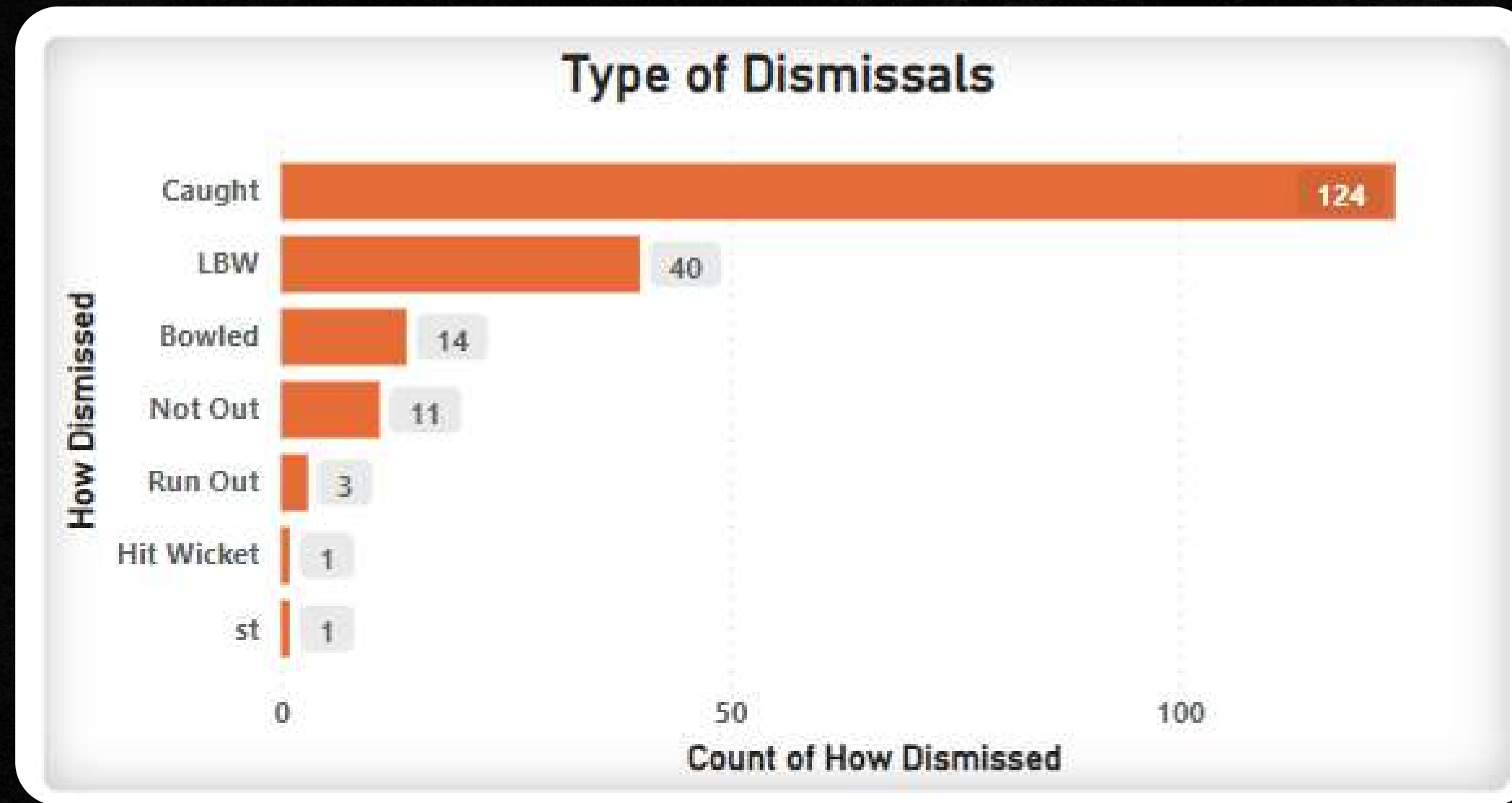



Insights

Average started trending up on 2014, rising by 14.25% (6.11) in 10 years.

Sql Query

```
SELECT Date, MAX(Avg) AS Batting_Average  
FROM test1  
GROUP BY Date  
ORDER BY Date ASC;
```

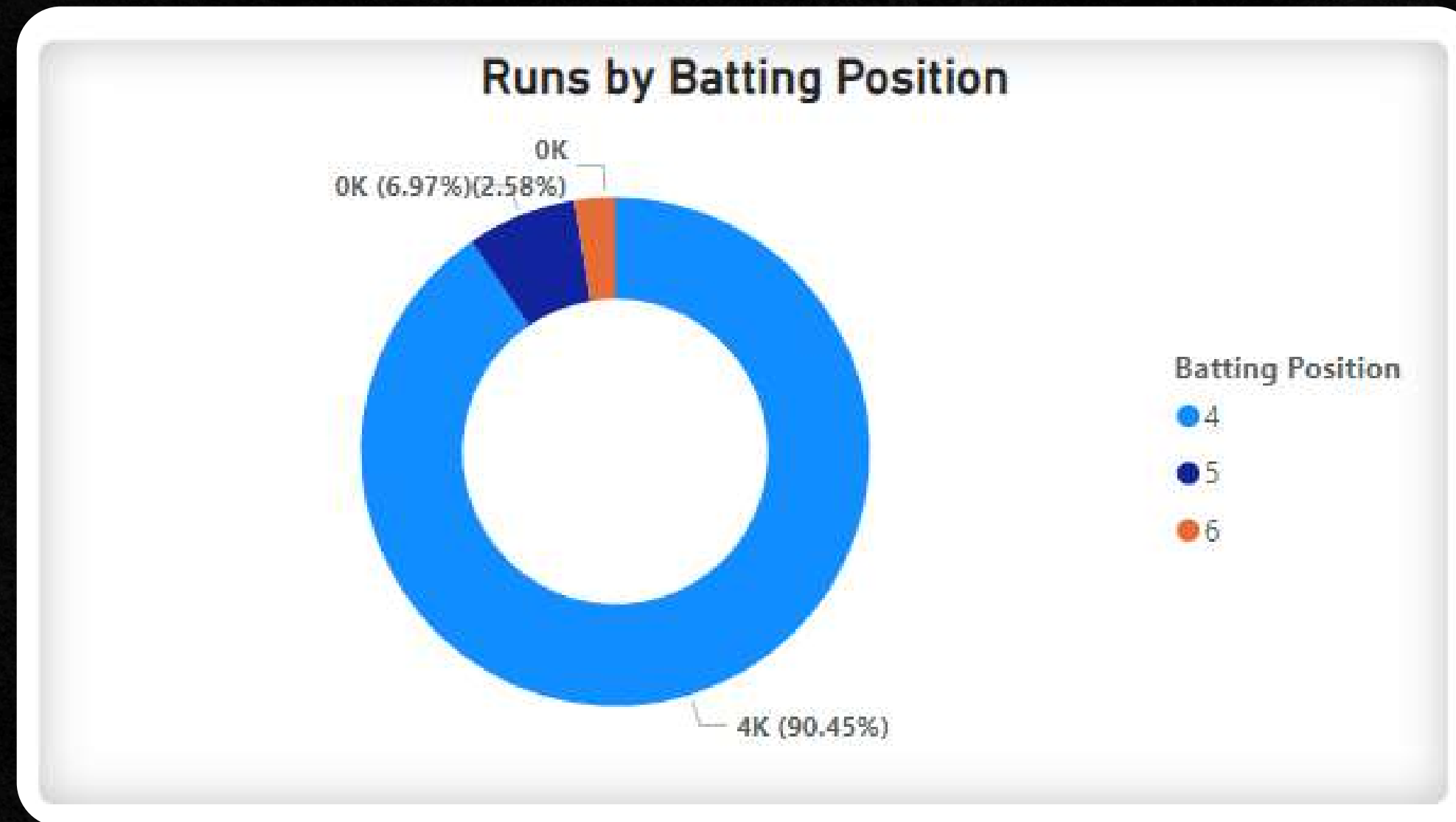



Insights

Count of How Dismissed was highest for Caught at 124, followed by LBW and DNB.

Sql Query

```
SELECT (`How Dismissed`),COUNT(*) AS  
Dismissal_Count  
FROM test1  
GROUP BY (`How Dismissed`)  
ORDER BY Dismissal_Count DESC;
```

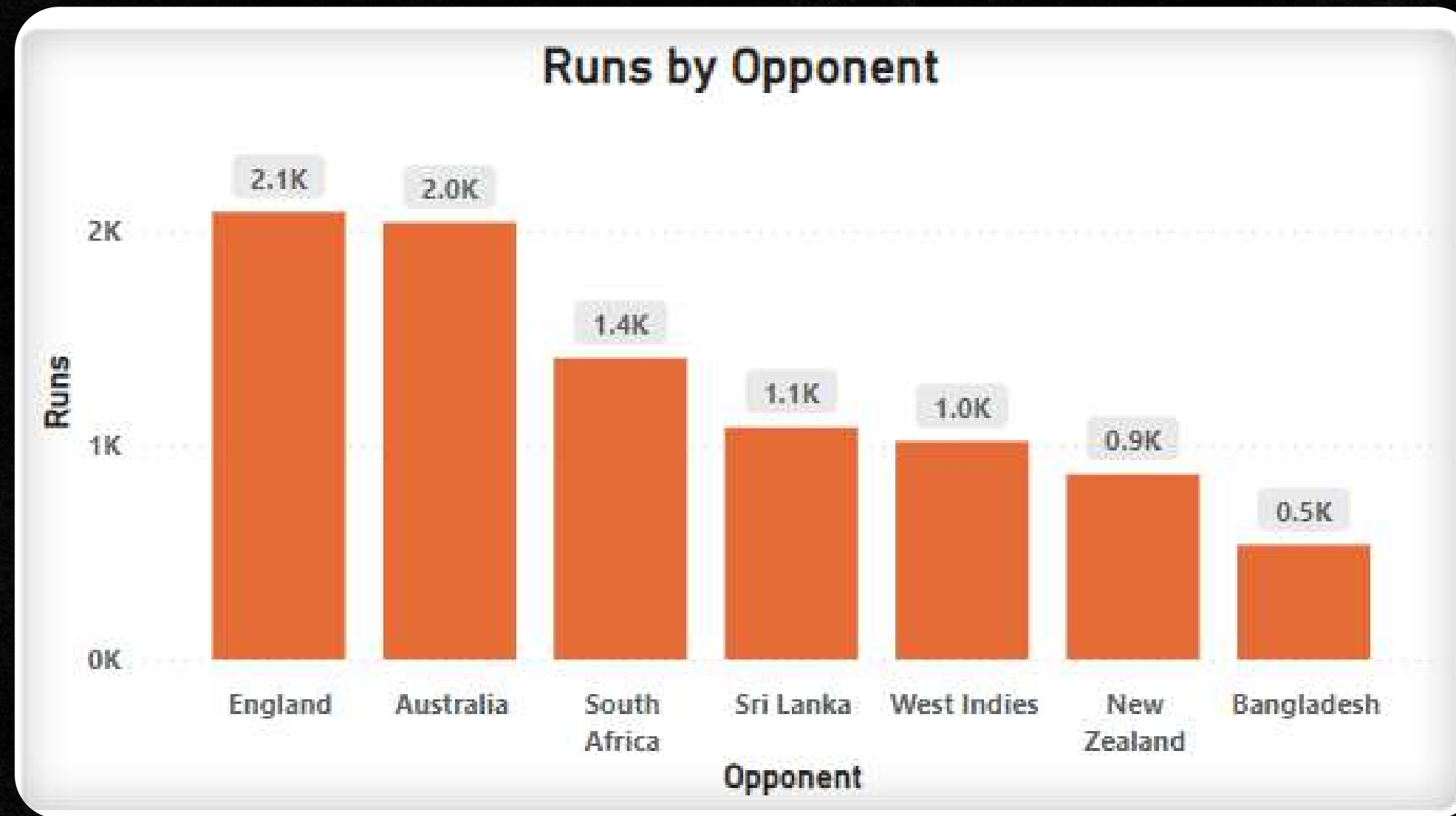



Insights

4th position had the highest Runs at 4063, followed by 5 at 313 and 6 at 116.

Sql Query

```
SELECT Position,SUM(Runs) AS TotalRuns  
FROM test1  
GROUP BY Position  
ORDER BY TotalRuns DESC;
```

Insights

England had the highest Runs and was 290.11% higher than Bangladesh, which had the lowest Runs at 536.

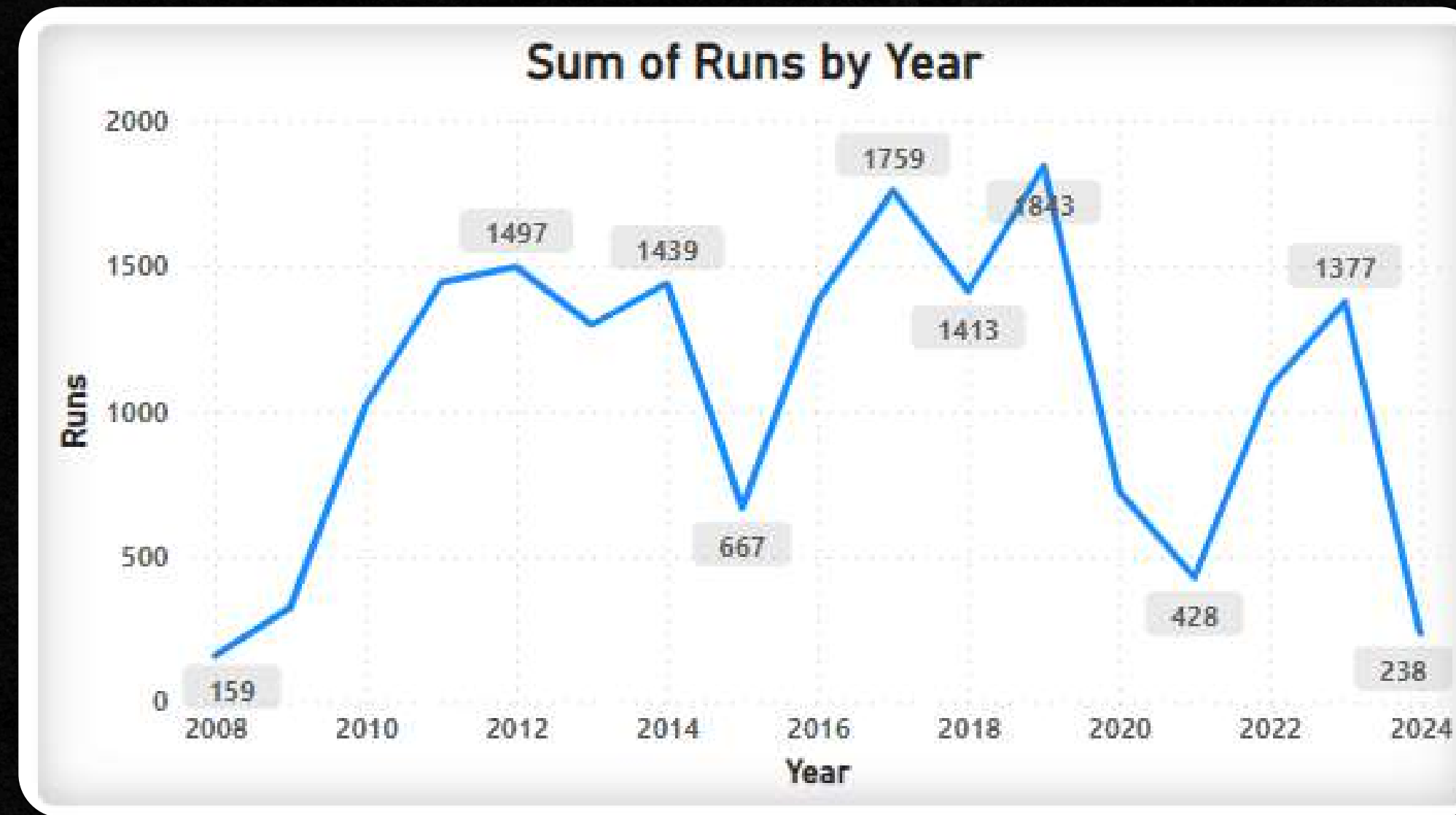
Sql Query

```
SELECT VS AS Opponent, SUM(Runs) AS  
Total_Runs  
FROM test1  
GROUP BY Opponent  
ORDER BY Total_Runs DESC;
```




Insights

(White Balls)

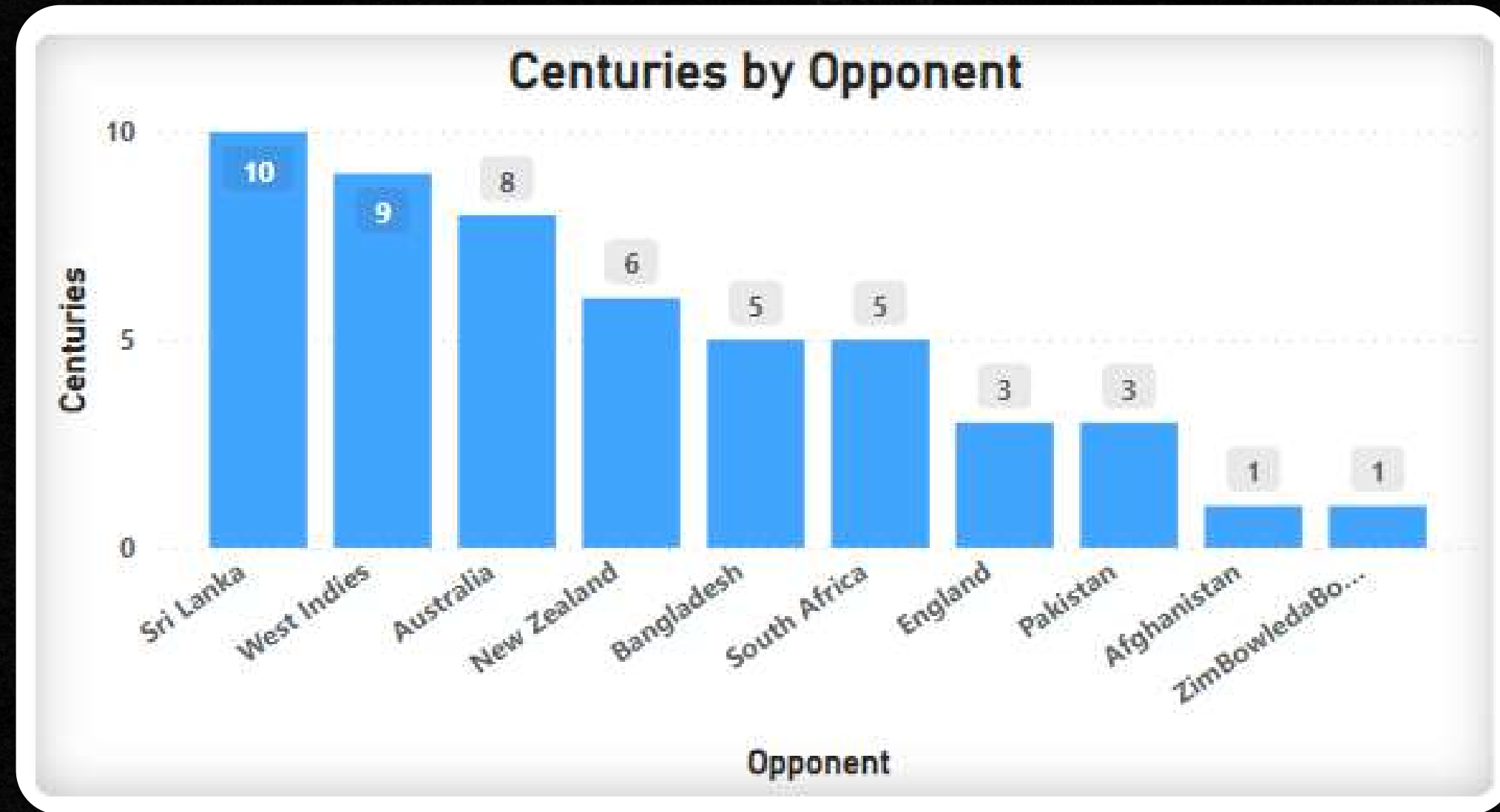


Insights

Runs started trending down on 2020, falling by 67.22% (488) in 4 years.

Sql Query

```
SELECT Date, Format AS FormatType, SUM(Runs)  
AS Total_Runs  
FROM white_ball  
WHERE Format IN ('ODI', 'T20I')  
GROUP BY Date, Format  
ORDER BY Date ASC;
```

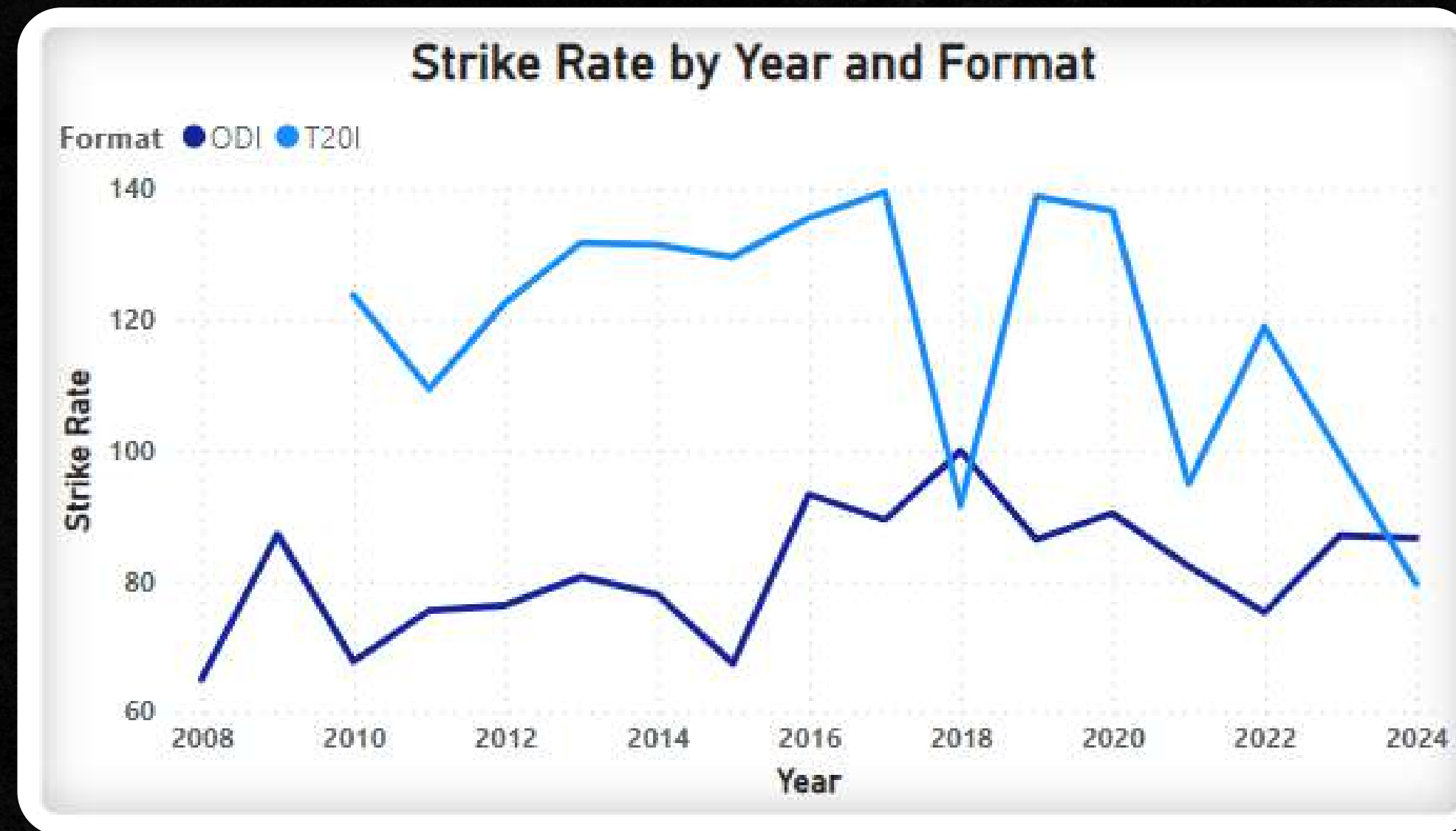



Insights

Sri Lanka accounted for 19.61% of Centuries.

Sql Query

```
SELECT VS AS Opponent, COUNT(*) AS Centuries
FROM white_ball
WHERE Format IN ('ODI' , 'T20') AND Runs >= 100
GROUP BY Opponent
ORDER BY Centuries DESC;
```

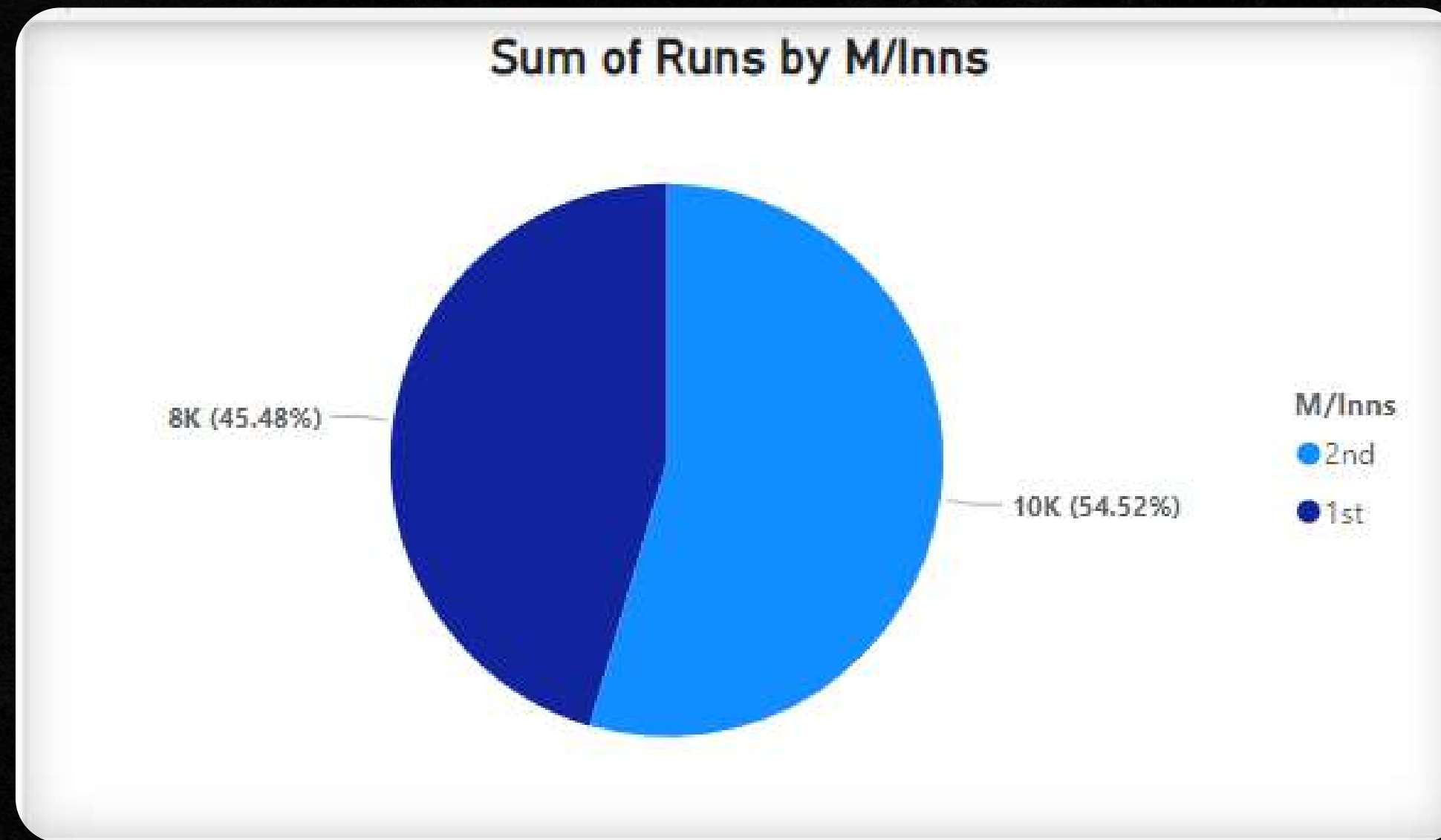



Insights

Strike Rate for ODI (33.32% increase) trended up while T20I (35.75% decrease) trended down between 2008 and 2024.

Sql Query

```
SELECT Format AS FormatType,AVG(Strike_rate)  
AS Average_Strike_Rate  
FROM white_ball  
WHERE Format IN ('ODI', 'T20I')  
GROUP BY Format  
ORDER BY Format;
```

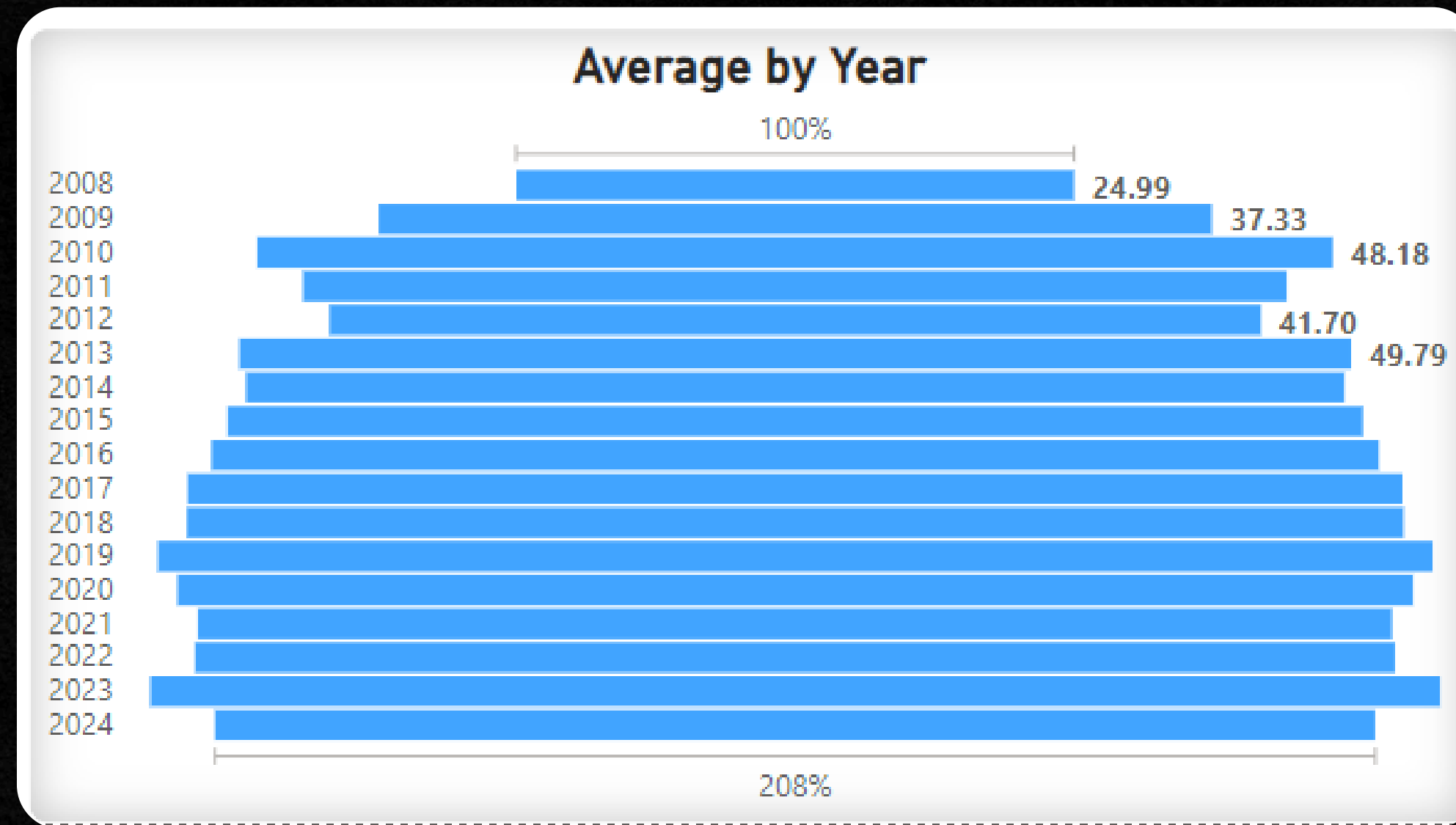



Insights

Runs for 2nd inning (9865) was higher than 1st (8229).

Sql Query

```
SELECT (`M/Inns`) AS Match_Innings,SUM(Runs) AS  
Total_Runs  
FROM white_ball  
WHERE Format IN ('ODI', 'T20I')  
GROUP BY (`M/Inns`)  
ORDER BY Total_Runs DESC;
```

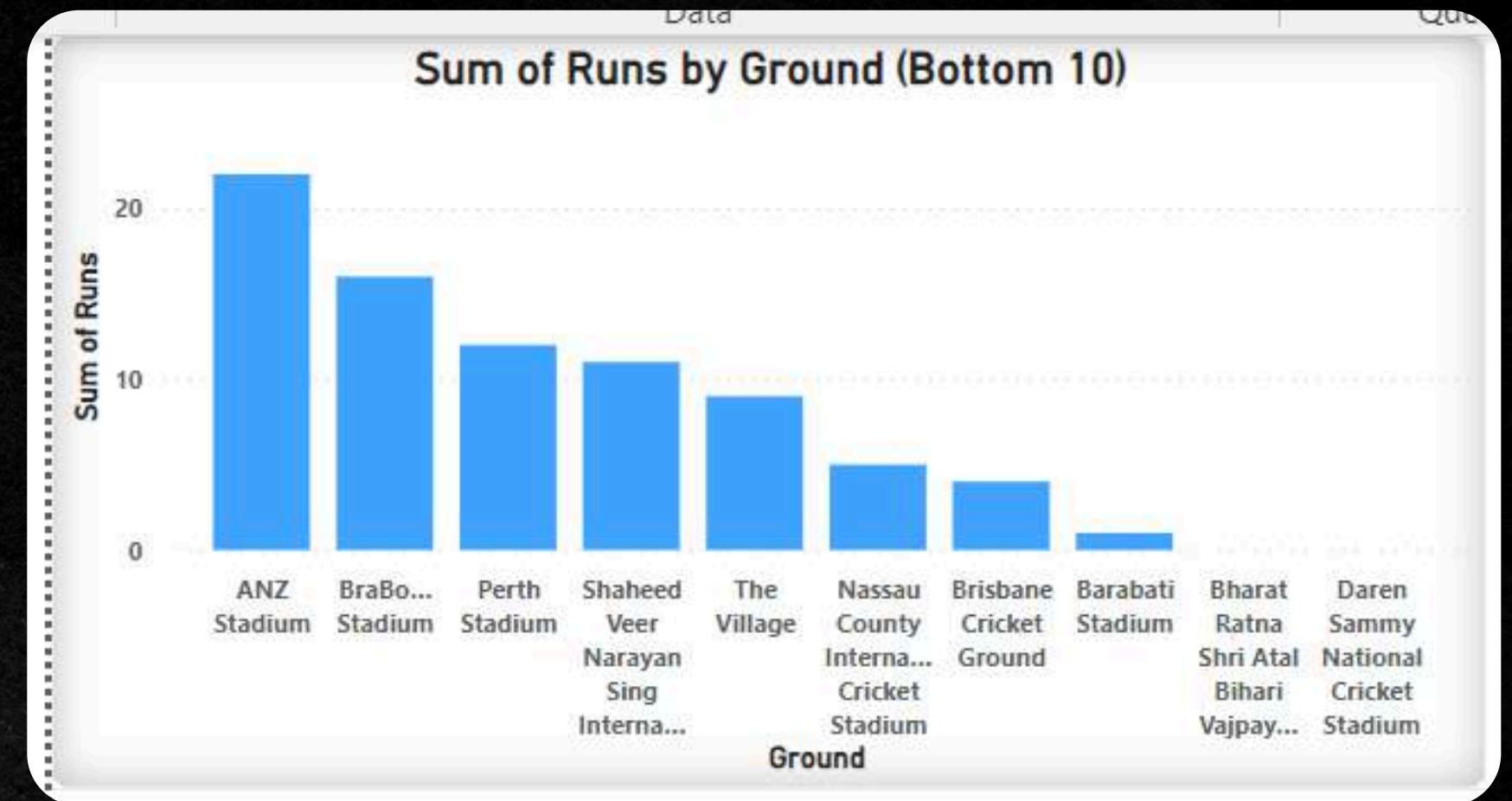
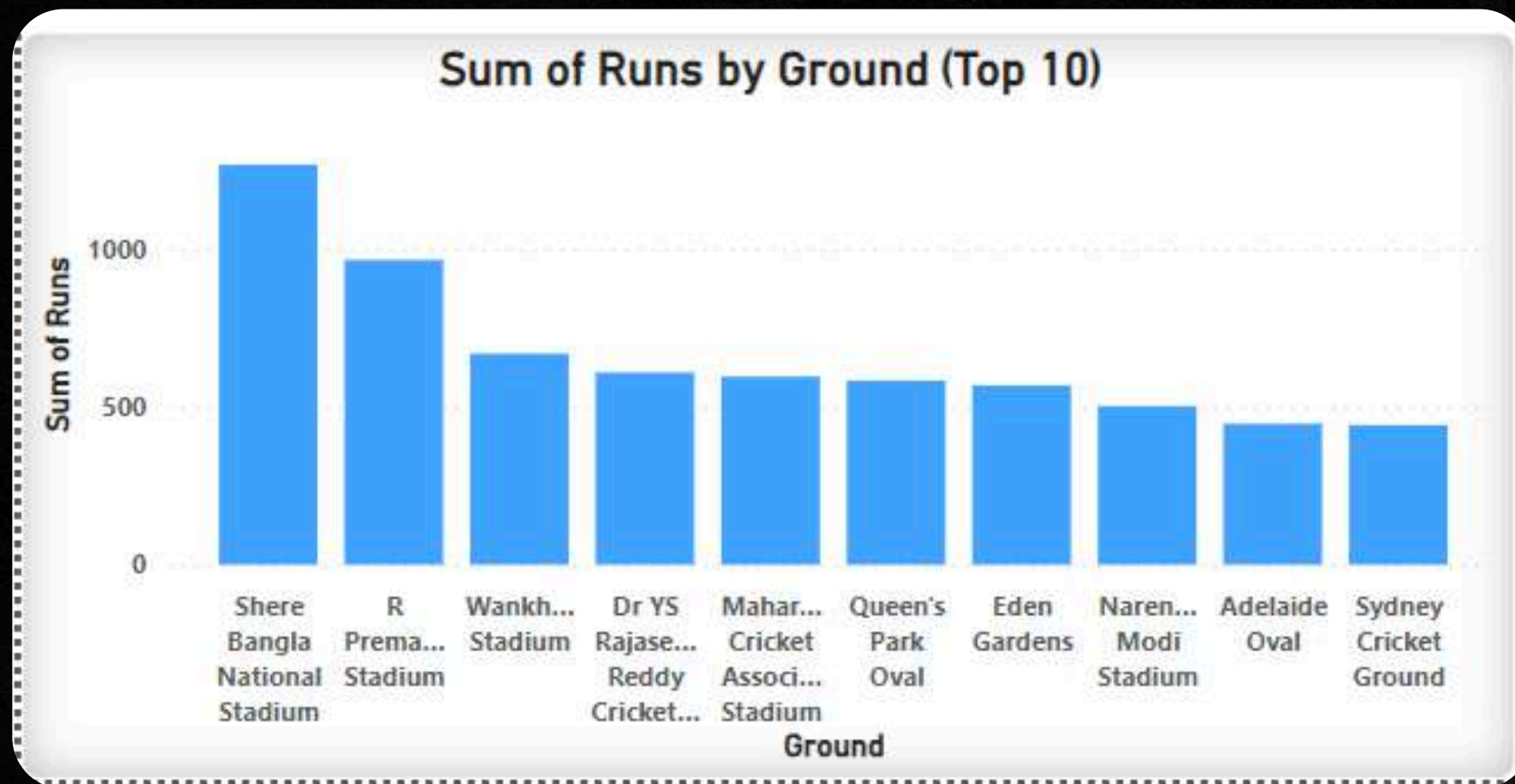



Insights

Kohli maintained his average throughout his career.

Sql Query

```
SELECT Date, MAX(Avg) AS Batting_Average  
FROM white_ball  
WHERE Format IN ('ODI', 'T20I')  
GROUP BY Date  
ORDER BY Date ASC;
```

Insights

It shows the Kohli's High scoring and low scoring grounds.

Sql Query

```
SELECT Date, MAX(Avg) AS Batting_Average
FROM white_ball
WHERE Format IN ('ODI', 'T20I')
GROUP BY Date
ORDER BY Date ASC LIMIT 10;
```


A photograph of Virat Kohli, an Indian cricketer, celebrating a century. He is wearing a blue Indian national cricket team jersey with "VIRAT K" and "INDIA" visible. He is holding a cricket bat in his right hand and his batting helmet in his left hand, both raised in the air. A female umpire in a pink shirt and black cap stands next to him. The background is a blurred crowd of spectators in a stadium. The image is decorated with green circular and semi-circular graphic elements. A black rounded rectangle with a white border is positioned at the bottom center, containing the word "Dashboards" in white text.

Dashboards



Virat Kohli's Red Ball Performance

115

Matches

9047

Runs

48.91

Average

45.89

Strike Rate

Opponent

Australia	New Zealand
Bangladesh	South Africa
England	Sri Lanka

Runs by Ground (Top 5)



Sum of Runs by Year



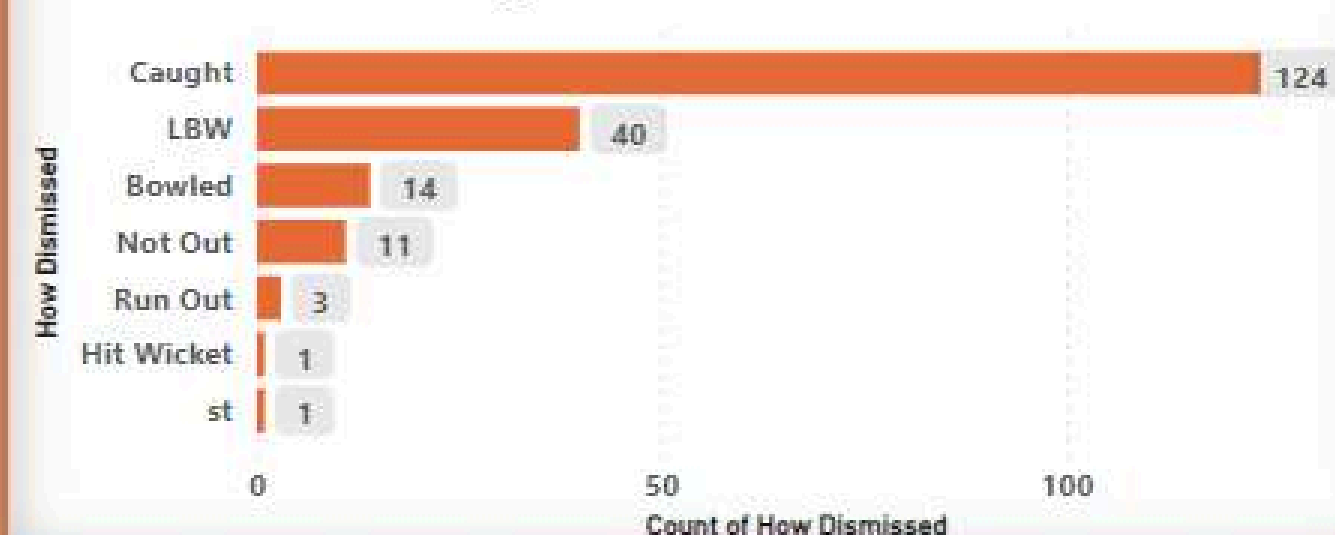
Year

2011	2015	2019	2023
2012	2016	2020	2024
2013	2017	2021	
2014	2018	2022	

Average Progression



Type of Dismissals





Virat Kohli's White Ball Performance

420

Matches

18K

Runs

183

Highest Score

92.29

Strike Rate

Format

ODI

T20I

Opponent

Afghanistan

Bangladesh

Australia

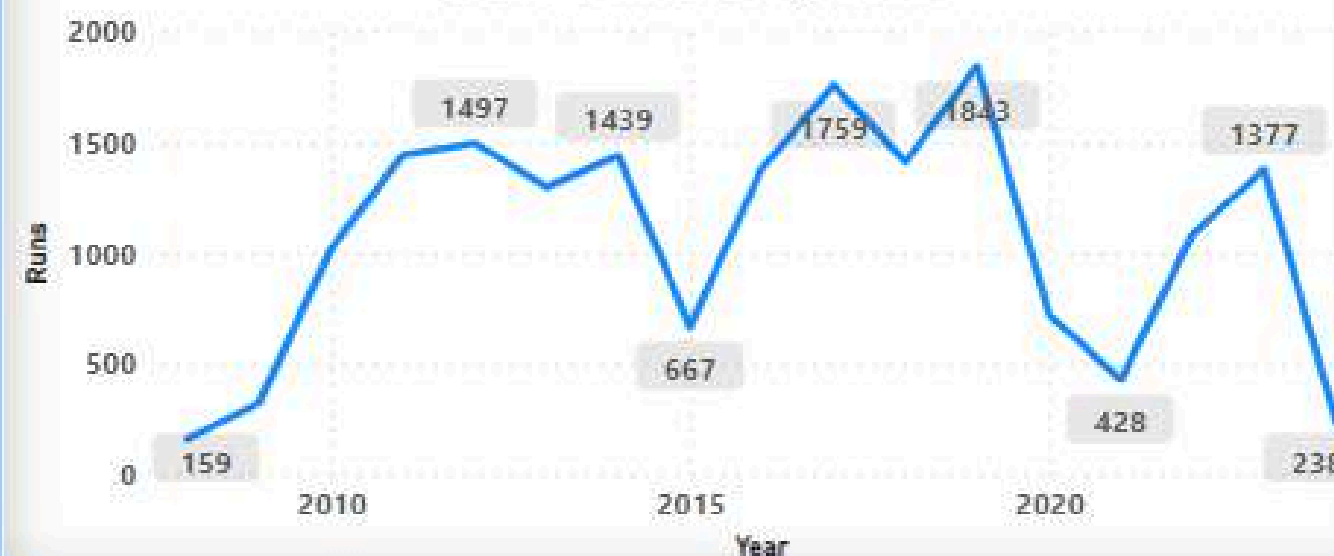
England

Year

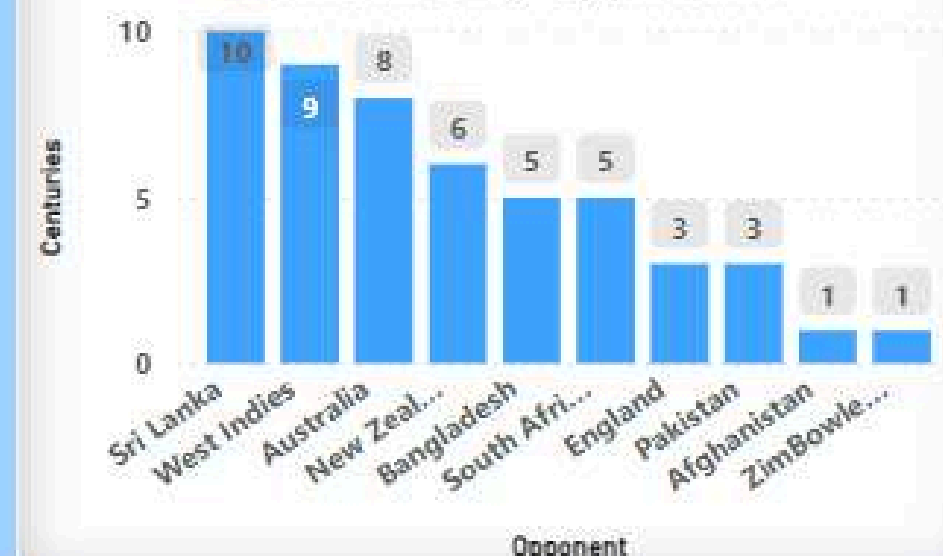
2008

2024

Sum of Runs by Year



Centuries by Opponent



Strike Rate by Year and Format



Sum of Runs by Ground





Recommendation & Valuable Aspects



Recommendation

Red Ball Format

- **Batting Partnerships:** Maintain his position at No. 4 to enable him to anchor innings while building meaningful partnerships.
- **Adaptation to Conditions:** Kohli's performances in overseas conditions (e.g., England or New Zealand) show room for improvement.
- **Strike Rate Optimization:** While consistency is key, Kohli's strike rate drops significantly when defending tough pitches. Focus on strike rotation drills in practice sessions to counter such scenarios.
- **Performance in Overcast Condition:** Focus on training for swinging deliveries.



Recommendation

White Ball Format

- **Focus on Chasing (2nd Innings):** Maximize his impact during run chases.
- **Boost Performance:** Utilize him as a stabilizer when early wickets fall or build a foundation to accelerate in death overs.
- **Strike Rate Optimization:** While consistency is key, Kohli's strike rate drops significantly when defending tough pitches. Focus on strike rotation drills in practice sessions to counter such scenarios.
- **Improving Century Conversion in T20Is.**

The background of the slide is a photograph of a cricket match. In the foreground, a player in a blue jersey is visible, holding a bat. In the background, a large crowd of spectators is visible, and another player in a green jersey with the number 10 and the name 'AFRIDI' is visible. The scene is set at night under stadium lights.

Valuable Aspects

- **Consistency in Chasing.**
- **Anchor Role in T20Is.**
- **Partnership Building in Tests.**
- **Pressure handling.**
- **Adaptability to Match Situations.**

A background image showing a cricket match in progress. In the foreground, a player in a blue Indian jersey is visible, holding a bat. In the background, a crowd of spectators is visible, and another player in a green jersey with the number 10 and the name 'AFRIDI' is seen. The scene is set at night under stadium lights.

Conclusion

Across all formats, Kohli's contributions have cemented his legacy as one of cricket's greats. Whether it's scoring runs, building partnerships, or leading by example, his influence on Indian cricket and the global stage is immeasurable. As he continues to adapt and evolve, Kohli remains a force to be reckoned with, epitomizing the blend of talent, discipline, and passion needed to excel in modern cricket.