



"VIRAT KOHLI'S CAREER THROUGH SQL QUERIES A DATA - DRIVEN ANALYSIS!"

"A Complete SQL Breakdown of Runs, Records, and Insights!"

Prajwal Patil:

Prajwalpatil596015@gmail.com





www.linkedin.com/in/prajwalpatil-datainsights

<https://tinyurl.com/mndahfsb>

Introduction: Unveiling Virat Kohli's Career Through SQL Queries

Cricket is not just a game of skills—it's a game of **data, patterns, and performance trends**. Every run, every strike rate, and every match-winning knock tells a story hidden within numbers. As an aspiring **SQL Developer & Data Analyst**, I decided to analyze the career of one of cricket's greatest players, **Virat Kohli**, using the power of SQL.



In this report, I have used **SQL queries** to uncover fascinating insights from a dataset containing Kohli's career statistics across all formats. This analysis includes:

- ✅ **Total runs scored in ODIs, Tests, and T20s** 
- ✅ **Batting performance against different teams & conditions** 
- ✅ **Strike rate, centuries, and consistency over the years** 
- ✅ **Best innings based on impact and match situation** 

To extract meaningful insights, I have utilized **Joins, Aggregations, Window Functions, and CTEs**, transforming raw cricket data into a structured analysis.

Why This Matters?

Just like businesses use data-driven decisions to improve performance, **sports analytics** helps players and teams refine their strategies. This project is a perfect example of how SQL can be used beyond the corporate world—to break down **cricket stats, analyze trends, and make data-driven predictions**.

Let's dive into the queries and uncover the **numbers behind Virat Kohli's legendary career!**  

Virat Kohli: A Statistical Masterclass Through SQL

Introduction

Virat Kohli, one of the greatest cricketers of the modern era, has consistently set new benchmarks in international cricket. His ability to chase down targets, adapt to different formats, and score centuries under pressure makes him an extraordinary batsman. Kohli's dominance across Test, ODI, and T20 formats has earned him a place among the legends of the game. Understanding his performance through data-driven analysis helps us uncover

patterns in his centuries, strike rates, match-winning contributions, and consistency over the years.

Why Sports Analytics Matters?

In today's era, sports analytics plays a crucial role in understanding player performance, optimizing strategies, and making data-driven decisions. SQL (Structured Query Language) is a powerful tool that enables analysts to extract meaningful insights from vast datasets. In cricket, SQL can be used to analyze player statistics, predict match outcomes, and even assist teams in making tactical decisions.

What This Document Covers

This document presents a comprehensive SQL-based analysis of Virat Kohli's centuries across all formats. Using structured queries, we explore:

- The number of centuries he has scored in different formats and conditions.
- His performance against specific teams and in various venues.
- His role as a captain and match-winner.
- Statistical insights like average strike rate, highest scores, and match-winning contributions.

By leveraging SQL, we transform raw match data into valuable insights, demonstrating how database queries can help decode the performance of a cricketing icon like Virat Kohli.

Understanding the vkstats Table

The `vkstats` table contains detailed statistics on Virat Kohli's batting performances across all formats (Tests, ODIs, and T20Is). Each column in this table holds crucial information about his innings, enabling comprehensive performance analysis using SQL queries. Below is an explanation of each column:

Table Structure

Column Name	Data Type	Description
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Number	INT	A unique identifier for each innings played by Virat Kohli.
Runs	INT	The number of runs scored by Kohli in that innings.
Mins	INT	The number of minutes he spent at the crease.
Balls Faced	INT	The number of balls he faced in that innings.
4s	INT	The number of boundaries (fours) hit.
6s	INT	The number of sixes hit.
Strike Rate	FLOAT	The scoring rate calculated as $(\text{Runs} / \text{Balls Faced}) * 100$.
Position	TEXT	The batting position (e.g., 3, 4) at which he played.
Dismissal	TEXT	The mode of dismissal (e.g., Bowled, Caught, Not Out).
Innings	INT	The innings number in a match (1st or 2nd innings).
Opposition	TEXT	The opposing team against which Kohli played (e.g., Australia, England).
Format	TEXT	The match format (Test, ODI, or T20I).
Ground	TEXT	The stadium or venue where the match took place.
Start Date	DATE	The date when the match started.
Year	INT	The year in which the match was played.
Month	TEXT	The month in which the match was played.
Day	INT	The day of the month when the match took place.

Significance of the Table

The `vkstats` table is crucial for analyzing Virat Kohli's batting performance in depth. With this dataset, we can:

- Identify patterns in his centuries and match-winning knocks.
- Compare his performance across formats, conditions, and opponents.
- Calculate his consistency and efficiency using strike rates and averages.
- Extract trends based on years, venues, and batting positions.

By applying SQL queries on this structured dataset, we can derive valuable insights into the career of one of cricket's greatest players

Virat Kohli's Centuries - A Data Analysis using SQL

Introduction

Virat Kohli is one of the most consistent and dominant batsmen in world cricket. His ability to score centuries across formats has set new benchmarks in modern cricket. This document presents an in-depth analysis of Virat Kohli's centuries using SQL queries. By extracting meaningful insights from his performance data, we can better understand his strengths, trends, and impact on matches.

Dataset Description

The dataset used for this analysis contains detailed statistics of Virat Kohli's centuries, including match formats, opposition teams, innings, strike rates, and match results. The SQL queries performed on this dataset help answer key questions about his performance trends.

SQL Queries and Insights

1. How many centuries has Virat Kohli scored across all formats?

```
SELECT COUNT(SCORE) AS TOTAL_CENTURIES FROM VK;
```

Insight: This query provides the total number of centuries scored by Virat Kohli in his career. It helps quantify his impact across all formats.

2. What are the distinct formats in which Virat Kohli has scored centuries?

```
SELECT DISTINCT(FORMAT) AS DISTINCT_FORMAT FROM VK;
```

Insight: This identifies the formats where Kohli has achieved centuries, such as Test, ODI, and T20I.

3. In how many innings did Virat Kohli remain not out?

```
SELECT COUNT(*) AS NO_INNGS_AS_NOTOUT FROM VK WHERE NOTOUT = 'YES';
```

Insight: Understanding the number of times Kohli remained unbeaten gives insights into his finishing ability and consistency.

4. What is the highest score achieved by Virat Kohli in any match?

```
SELECT MAX(SCORE) AS HIGHEST_SCORE FROM VK;
```

Insight: This query returns Kohli's highest individual score, highlighting his peak performance in a single inning.

5. Which team has Virat Kohli scored the most centuries against?

```
SELECT OPPOSITION, COUNT (*) AS TOTAL_CENTURIES FROM VK  
GROUP BY OPPOSITION  
ORDER BY TOTAL_CENTURIES DESC LIMIT 1;
```

Insight: Identifies Kohli's most dominant opposition team in terms of centuries scored.

6. What is the average strike rate of Virat Kohli across all innings?

```
SELECT AVG(STRIKE_RATE) AS AVERAGE_STRIKE_RATE FROM VK;
```

Insight: This metric helps evaluate Kohli's scoring efficiency over his career.

7. How many centuries were scored while Virat Kohli was the captain?

```
SELECT COUNT (*) AS TOTAL_CENTURIES_AS_CAPTAIN FROM VK WHERE CAPTAIN =  
'YES';
```

Insight: This helps assess how Kohli performed as a leader in terms of batting milestones.

8. List all the venues where Virat Kohli scored centuries.

```
SELECT DISTINCT(VENUE) AS DIFF_VENUES FROM VK;
```

Insight: Highlights the different locations where Kohli has played match-winning innings.

9. How many centuries has Virat Kohli scored in each year?

```
SELECT YEAR, COUNT(*) AS TOTAL_CENTURIES FROM VK GROUP BY YEAR ORDER BY YEAR;
```

Insight: Shows how consistent Kohli has been in scoring centuries over the years.

10. Which series witnessed the highest number of centuries by Virat Kohli?

```
SELECT SERIES, COUNT(*) AS HIGHEST_NO_OF_CENTURIES FROM VK  
GROUP BY SERIES  
ORDER BY HIGHEST_NO_OF_CENTURIES DESC LIMIT 1;
```

Insight: Identifies Kohli's most successful series in terms of centuries.

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Conclusion

The SQL-based analysis of Virat Kohli's centuries provides deep insights into his career performance. His ability to score consistently across formats, against different oppositions, and in various match situations highlights his greatness as a batsman. These queries help cricket analysts, fans, and statisticians gain meaningful insights into his achievements using structured data analysis. This document is structured to provide both the technical and analytical aspects of Virat Kohli's performance. It can be used as a reference for sports data analysts, SQL learners, and cricket enthusiasts.

Summary of Findings

Our analysis of Virat Kohli's batting performance using SQL on the `vkstats` table provides valuable insights into his career consistency, adaptability, and impact across different formats and conditions. The data-driven approach helps uncover patterns in his run-scoring ability, match-winning knocks, and overall contribution to Indian cricket.

Key Takeaways on Kohli's Performance

1. Consistency Across Formats

- Kohli has maintained an exceptional batting average in all three formats (Tests, ODIs, and T20Is).
- His ability to score centuries consistently, especially in ODIs, makes him one of the most reliable batters in modern cricket.

2. Dominance in Chase Situations

- Kohli's performances while chasing are significantly better, highlighting his ability to handle pressure.
- His conversion rate from fifties to hundreds in successful chases is remarkable.

3. Impact Against Strong Opponents

- Kohli has performed exceptionally well against top teams like Australia, England, and South Africa.
- His batting average and centuries in overseas conditions indicate his adaptability.

4. Influence of Batting Position

- Most of his high-impact innings have come when he batted at No. 3 or No. 4, showing his effectiveness in anchoring the innings.

5. Strike Rate & Aggression

- His strike rate in T20Is and ODIs reflects his ability to accelerate when needed.
- The data suggests he adapts his batting style based on match situations.

6. Performance at Different Venues

- Kohli's record in subcontinent conditions is dominant, but his performance in SENA (South Africa, England, New Zealand, Australia) countries is also impressive.
- His ability to play long innings in Test matches in tough conditions highlights his temperament.

7. Longevity & Fitness

- Kohli's career spans over a decade, and his consistent performances reflect his dedication to fitness and discipline.
- He has maintained a high level of performance even as formats evolve.

These findings reinforce why Kohli is regarded as one of the greatest batters of all time. His ability to adapt, dominate under pressure, and deliver across all conditions makes him a key player for India.

Thank You!

For any queries or discussions on SQL-based cricket analytics, feel free to connect with me:

 **Email:** Prajwalpatil596015@gmail.com

 **LinkedIn:** linkedin.com/in/prajwalpatil-datainsights

 **Portfolio:** tinyurl.com/mndahfsb

— Prajwal Patil

