PERFORMANCE ANALYSIS OF PLAYERS IN THE 2022 T20 WORLD CUP

A logo of a sports team

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# INTRODUCTION

In the modern era of sports, the utilization of data-driven insights has become increasingly crucial in enhancing team performance and achieving success. Sports analytics, a rapidly evolving discipline, has revolutionized the way teams strategize, train, and select their players. The following report leverages sports analytics to present an in-depth analysis of player performance in the 2022 T20 World Cup.

The Indian club, Mumbai Indians, recognizes the growing importance of data and analytics in the world of sports. With the objective of assembling a formidable team for the upcoming auction, this analysis aims to identify top-performing players who not only meet specific criteria but also align with the principles of sports analytics. By evaluating player statistics and adherence to performance criteria, we aim to provide Mumbai Indians with valuable insights to make informed decisions during the auction process.

# Problem Statement:

The Mumbai Indians face the challenge of assembling a competitive team for the upcoming auction in a highly competitive cricketing landscape. To address this challenge effectively, they need to identify top-performing players based on specific performance criteria and align their choices with the principles of sports analytics.

# Purpose:

The primary purpose of this analysis is to assist the Mumbai Indians in making data-driven decisions during the auction process. By evaluating player statistics and performance against specific criteria, we aim to identify players who can help the team achieve its goals, including the ability to score at least 180 runs on average and defend 150 runs on average.

# DATA COLLECTION

The data is collected from a dataset available on Kaggle along with different columns giving us the required attributes for analyzing the data.

Link to the dataset: https://www.kaggle.com/datasets/raahulverma/icc-t20-wc-2022

# DATA MODELING:

To assess player performance, we transformed the raw data into meaningful metrics. Key data transformations include calculating batting averages, strike rates, bowling economy rates, and other relevant statistics. These transformations were crucial in deriving insights and making player assessments.

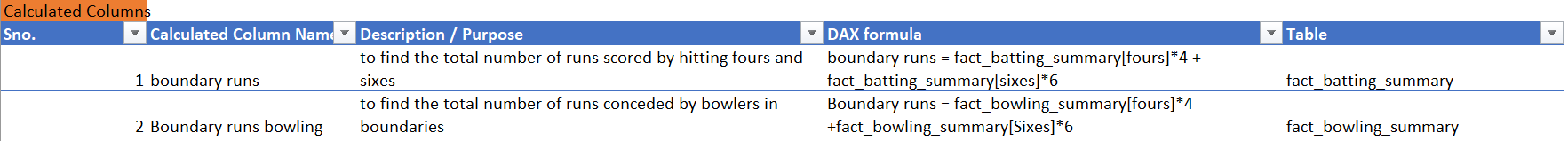
## Data **Transformation** and cleaning:

Following Dax measures were used to transform the data:

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And below is the calculated column:



* Using the first row as a header function to assign headings to each column
* Use of text before delimiter function to remove unnecessary text in player name
* Use of format and trim to remove extra spaces.
* Removing duplicate values
* Use of conditional column to differentiate between the qualifier and super 12 matches
* Capitalizing and renaming the column
* Replacing values (for instance: out with 0 and not out with 1)

# Key performance indicators (KPIs) :

The Key performance indicators that are generated from the given dataset are:

* **Batsmen**: Average runs scored in an innings, strike rate, total innings batted, boundary percentage, and batting position.
* **Middle-Order Batsmen**: Average runs scored in an innings, strike rate, total innings batted, average balls faced, and batting position.
* **Finishers/Lower Orders:** Average runs scored in an innings, strike rate, total innings batted, average balls faced, and batting position.
* **All-rounders**: Average runs scored in an innings, strike rate, total innings batted, total innings bowled, bowling economy, and bowling strike rate.
* **Specialist Fast Bowlers:** Wickets taken, balls bowled, runs conceded, bowling economy, bowling strike rate, and dot ball percentage.

# Players Category and Criteria:

Players were categorized as openers, middle-order batsmen, finishers, all-rounders, or specialist fast bowlers based on their roles and performance. Specific criteria were applied to each category to identify top players.

# Top Players in each category:

## Openers:

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## Middle-Order Batsman:

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## Finisher/Lower Order:

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## All-Rounders:

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## Specialist Fast Bowlers:

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# REPORTING AND DATA VISUALIZATION

We have generated different visualizations using Power BI to determine the factors required to get the desired output.

Power BI is used for reporting the visualization with different types of formations like:

* Area Chart
* Scatter Chart
* Card
* Table
* Slicer

1. **Opener:**The following chart gives us a visualized format of the number of openers who have performed well in World Cup:

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## Middle-order:

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## Finisher/ lower order:

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## All- Rounders/Lower middle order:

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## Fast Bowlers:

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# Conclusion

Based on the analysis, we have identified a group of top-performing players in each category who meet the specified criteria. These players have demonstrated the skills and consistency required to contribute significantly to the Mumbai Indians' success in the 2022 T20 World Cup.

# Recommendations

It is recommended that the Mumbai Indians consider these identified players during the auction process. However, final decisions should also take into account other factors such as team strategy, playing conditions, and budget constraints.