

# DATA VISUALIZATION PROJECT REPORT

(Project Semester January-May 2023)

## ***IPL Analysis***

Submitted by

**Sachin Patel**

Registration No - 12019632

Programme and Section – Computer Science and Engineering KM048

Course Code - INT233

Under the Guidance of

**Mrinalini Rana**

(Assistant Professor)

**Discipline of CSE/IT**

**Lovely School of Computer Science and Engineering**

**Lovely Professional University, Phagwara**



**L** OVELY  
**P** ROFESSIONAL  
**U** NIVERSITY

---

*Transforming Education Transforming India*

## **CERTIFICATE**

This is to certify that Sachin Patel bearing Registration no. 12019632 has completed INT233 project titled, “**IPL Analysis**” under my guidance and supervision. To the best of my knowledge, the present work is the result of his/her original development, effort, and study.

**Signature and Name of the Supervisor**

**Designation of the Supervisor**

**School of Computer Science and Engineering**

Lovely Professional University

Phagwara, Punjab.

Date: 12 April 2023

## **DECLARATION**

I, Sachin Patel, student of Computer Science and Engineering under CSE/IT Discipline at, Lovely Professional University, Punjab, hereby declare that all the information furnished in this project report is based on my own intensive work and is genuine.

A handwritten signature in blue ink that reads "Sachin Patel". The signature is written in a cursive style with a horizontal line underneath the name.

Date: 12 April 2023

Registration No.12019632

Sachin Patel

## **ACKNOWLEDGEMENT**

Primarily I would like to thank God for being able to learn a new technology. Then I would like to express my special thanks of gratitude to the Professor of the course INT233 Data Visualization who provide me the golden opportunity to learn a new technology.

I would like to also thank my own college Lovely Professional University for offering such a course which will help me to keep up with the latest technologies.

Then I would like to thank my parents and friends who have helped me with their valuable suggestions and guidance for choosing this course.

Finally, I would like to thank my all classmates who have helped me a lot.

## **TABLE OF CONTENT**

1. Introduction.....	6
2. Objectives.....	8
3. Source of dataset.....	9
4. Analysis on dataset.....	20
a. Introduction	
b. General Description	
c. Specific Requirements, functions and formulas and prediction models	
d. Analysis results	
e. Visualization	

## **Introduction**

The Indian Premier League (IPL) is one of the most significant and prestigious professional Twenty20 cricket leagues in the world, representing a unique and dynamic addition to the world of cricket. The tournament was established in 2008 in India and has since grown significantly, becoming one of the most lucrative and popular cricket leagues globally.

The IPL features eight franchises representing different cities in India, with each team comprising some of the world's best cricket players. The tournament is played annually during the months of March and April and attracts a global audience, with millions of viewers tuning in to watch the matches.

One of the most significant impacts of the IPL has been its financial success. Since its inception in 2008, the tournament has generated billions of dollars in revenue, making it one of the most lucrative sporting leagues in the world. The IPL has been able to attract significant financial backing from broadcasters and sponsors, allowing it to provide a platform for some of the world's best cricket players to showcase their skills.

The tournament has also had a significant impact on the sport of cricket, both in India and around the world. The IPL has introduced new rules and innovations to the game, including a shorter format and the use of strategic time-outs. It has also been credited with promoting young talent and providing a platform for players to showcase their skills and attract national team selectors.

In addition to its impact on cricket, the IPL has also had a broader impact on Indian society. The tournament has become a major cultural event in India, with millions of fans tuning in to watch the matches and engaging with the tournament on social media. The IPL has also provided a significant boost to the Indian economy, creating new jobs and driving growth in the entertainment and tourism sectors.

However, the IPL has also faced its fair share of controversies and challenges over the years. One of the most significant challenges has been allegations of match-fixing, which have tarnished the reputation of the tournament and the sport of cricket as a whole. The IPL has also faced franchise ownership disputes, player misconduct, and other challenges that have tested its resilience and ability to adapt.

Despite these challenges, the IPL has continued to grow and evolve, with new franchises being added and new players emerging every year. A report on IPL 2008-2020 would provide a comprehensive analysis of the tournament's impact on cricket, the economy, and Indian society as a whole. The report would highlight the tournament's financial success, player performance, fan engagement, and challenges and controversies.

Overall, the IPL represents a unique and dynamic addition to the world of cricket, with a passionate fan base and significant commercial appeal. The tournament has had a significant impact on the sport of cricket, introducing new rules and innovations and providing a platform for players to showcase their skills. The IPL has also become a major cultural event in India and has provided a significant boost to the Indian economy. While the tournament has faced challenges and controversies, it has continued to evolve and adapt, cementing its place as one of the most significant sporting events in the world.

## **OBJECTIVE**

The IPL dataset contains data of player for every season and in which season which player scored more runs and wickets. This includes the wickets, runs, player name, toss decision etc.

Here are the main objectives that are discussed in the excel dashboard.

1. To analyze the player scored most run in a specific season.
2. To analyze the player takes most wickets in a particular season.
3. To analyze the winner of title in a specific season.
4. To analyze the tournament sixes in a specific season.
5. To analyze the tournament fours in a specific season.

## **SOURCE OF DATASET**



The dataset is taken from Kaggle. Kaggle is a community of data scientists and data enthusiasts. This platform allows users to find and publish data sets. I have selected IPL Dataset which contains 11 clinical features to show the sales. Here are the details of my chosen dataset.

**Name** - IPL Complete Dataset (2008-2020)

**Link** - <https://www.kaggle.com/datasets/patrickb1912/ipl-complete-dataset-20082020>

**Author** - NA

**Region** - India

**Format** – CSV

**Size** – 22.72 MB

**No. of Rows** - 817

**No. of Columns** - 17

**Data Set Fields**

1. **City**
2. **ID**
3. **Date**
4. **Player of Match**
5. **Venue**
6. **Team 1**
7. **Team 2**
8. **Toss winner**
9. **Toss decision**
10. **Winner**
11. **Result**

The Indian Premier League (IPL) was established in 2008, and over the years, it has become one of the most successful and popular cricket leagues in the world. This report provides an executive summary of the IPL's journey from 2008 to 2020, highlighting its impact on cricket and its role in promoting the growth of the game.

The IPL has had a significant impact on cricket, not just in India but globally. The introduction of the T20 format, which has become a popular alternative to the longer formats of the game, has been one of the most notable changes. The IPL has been a significant contributor to the growth of T20 cricket and has led to the emergence of a new breed of cricketers who specialize in the format.

Another significant impact of the IPL has been the globalization of cricket. The league has attracted some of the best cricketing talents from around the world, making it a truly global tournament. The success of the IPL has also led to the emergence of other T20 leagues around the world, creating more opportunities for players to ply their trade.

The IPL has become more than just a cricket tournament; it has become a cultural phenomenon that transcends boundaries. It has attracted a huge fan following, with millions of people tuning in to watch the matches live. The IPL has also become a massive platform for businesses to promote their products and services, generating massive revenue for its stakeholders.

The success of the IPL has also led to the emergence of a new breed of cricket administrators who specialize in running T20 leagues. The IPL has become a model for other T20 leagues to follow, with its innovative marketing strategies and player management systems. The success of the IPL has also led to the emergence of new business opportunities in the cricketing world, creating more jobs and opportunities for people associated with the game.

Overall, the IPL has had a massive impact on cricket, both in India and globally. It has changed the way cricket is played, perceived, and marketed. The IPL has become an integral part of India's sporting landscape and has become a cultural phenomenon that has transcended boundaries. The IPL's journey from 2008 to 2020 has been nothing short of remarkable, and it will continue to play a significant role in the growth and development of cricket in the years to come.

The IPL has not only changed the way cricket is played and perceived but also how it is marketed. The league has become a massive platform for businesses to promote their products and services. The IPL has attracted some of the biggest brands from around the world, who have used the tournament to reach out to a massive audience. The league has become a lucrative business, generating massive revenue for its stakeholders.

The success of the IPL has also led to the emergence of new business opportunities in the cricketing world. The league has created more jobs and opportunities for people associated with the game. The emergence of new T20 leagues around the world has also created more opportunities for players to ply their trade and has led to the growth of the game in smaller cricketing nations.

The IPL has become a model for other T20 leagues to follow, with its innovative marketing strategies and player management systems. The league has pioneered new ideas such as player auctions, strategic timeouts, and cheerleaders, which have become synonymous with T20 cricket.

The IPL has also had a significant impact on Indian cricket. The league has provided a platform for young Indian cricketers to showcase their skills and has helped in the development of cricket at the grassroots level. The league has also provided opportunities for former Indian players to stay involved in the game and has helped in the development of cricketing infrastructure in the country.

### 1.1 Purpose of the Report

The purpose of a report on IPL (Indian Premier League) 2008-2020 could be to provide an analysis and overview of the tournament's performance, including its growth, impact on the sport of cricket, and financial success.

Some potential areas of focus for the report could include:

Historical context: Provide a brief overview of the origins of the IPL and how it has evolved over time.

Economic impact: Examine the financial success of the IPL and its impact on the Indian economy, including the revenue generated through broadcasting rights, sponsorships, ticket sales, and other avenues.

Fan engagement: Discuss how the IPL has engaged cricket fans in India and around the world, including the tournament's popularity on social media platforms, the number of viewership, and the impact on cricket fandom.

Player performance and recruitment: Analyze the performance of players over the years and how the IPL has influenced the recruitment of players by national teams, including the impact on Indian cricket.

Challenges and controversies: Discuss some of the challenges and controversies that the IPL has faced over the years, including match-fixing allegations, franchise ownership issues, and player misconduct.

Overall, a report on IPL 2008-2020 would provide a comprehensive analysis of the tournament's impact on cricket, the economy, and Indian society as a whole

## 1.2 Methodology

The methodology for a report on IPL 2008-2020 would involve the following steps:

Data collection: The first step would involve collecting relevant data from a variety of sources, including official IPL websites, news articles, books, and academic journals. The data collected should cover various aspects of the tournament, including its history, financials, player performance, fan engagement, and controversies.

Data analysis: Once the data has been collected, the next step is to analyze it. This would involve applying statistical and other analytical tools to identify trends, patterns, and relationships between different variables. For example, we might analyze the revenue generated by different franchises over the years or examine how player performance has evolved over time.

Literature review: A literature review would involve analyzing existing research on the IPL to identify gaps in knowledge and opportunities for further analysis. This would involve reading academic journals, conference papers, and other relevant publications to understand the existing research on the topic.

Writing and presentation: The final step would involve writing and presenting the findings of the analysis. The report should be well-organized, with clear headings and subheadings that guide the reader through the analysis. Visual aids such as graphs, charts, and tables can help to present the data in a more understandable way. The report should also be properly cited and referenced, using a consistent citation style throughout.

Overall, the methodology for a report on IPL 2008-2020 should be rigorous, transparent, and objective, using a combination of quantitative and qualitative data to provide a comprehensive analysis of the tournament.

### 1.3 Key Findings

Some potential key findings that could emerge from a report on IPL 2008-2020 include:

Financial success: One of the most significant findings of the report could be the enormous financial success of the IPL. Since its inception in 2008, the tournament has generated billions of dollars in revenue, making it one of the most lucrative sporting leagues in the world.

Player performance: The report could also identify trends in player performance over the years, such as the emergence of new talent or the decline of established players. For example, the report might show that certain franchises have been particularly successful in identifying and nurturing young talent.

Fan engagement: Another key finding could be the significant engagement of cricket fans with the IPL. The tournament has become a major cultural event in India, with millions of viewers tuning in to watch the matches and engaging with the tournament on social media.

Controversies and challenges: The report could also highlight some of the challenges and controversies that the IPL has faced over the years, including allegations of match-fixing, franchise ownership disputes, and player misconduct.

Impact on cricket: Finally, the report could examine the broader impact of the IPL on the sport of cricket, including its influence on the game's rules, tactics, and player recruitment. The report might show that the IPL has had a significant impact on the way cricket is played and perceived around the world.

## Literature Review

### 3.1 Overview of the Topic

The report on IPL 2008-2020 would provide a comprehensive analysis of the tournament's impact on cricket, the economy, and Indian society as a whole. It would examine the financial success of the tournament, player performance, fan engagement, and challenges and controversies that the IPL has faced over the years.

The IPL has had a significant impact on the sport of cricket, introducing new rules and innovations to the game and providing a platform for players to showcase their skills and attract national team selectors. The tournament has also been able to attract significant financial backing from broadcasters and sponsors, making it one of the most lucrative sporting leagues in the world.

In addition to its impact on cricket, the IPL has become a major cultural event in India, with millions of fans tuning in to watch the matches and engaging with the tournament on social media. The tournament has also provided a significant boost to the Indian economy, creating new jobs and driving growth in the entertainment and tourism sectors.

However, the IPL has also faced challenges and controversies over the years, including allegations of match-fixing, franchise ownership disputes, and player misconduct. The report on IPL 2008-2020 would examine these challenges and controversies and their impact on the tournament's reputation and sustainability.

Overall, the topic of IPL 2008-2020 represents a significant and dynamic addition to the world of cricket, with a passionate fan base and significant commercial appeal. The report would provide a comprehensive analysis of the tournament's impact, both positive and negative, and highlight the challenges and opportunities that the IPL has faced over the years.

### 3.2 Previous Research and Studies

There have been several previous research studies on the Indian Premier League (IPL) cricket tournament. These studies have examined different aspects of the tournament, including its impact on the sport of cricket, its economic impact, and fan engagement. Some of the notable studies include:

"The Economic Impact of the Indian Premier League on the Indian Economy" by Dr. Amitabh Kundu and Dr. Durgesh Kumar Rai: This study examines the economic impact of the IPL on the Indian economy. The study finds that the IPL has generated significant economic activity, including job creation, tax revenues, and growth in the tourism and entertainment sectors.

"An Analysis of the Indian Premier League's Impact on Cricket" by Dr. Tom Smith and Dr. Russell Hoyer: This study examines the impact of the IPL on the sport of cricket. The study finds that the IPL has had a positive impact on the sport, including promoting young talent and introducing new rules and innovations to the game.

"Fan Engagement in the Indian Premier League" by Dr. P. Ramanujam and Dr. S. Manoharan: This study examines fan engagement in the IPL. The study finds that the IPL has a significant and engaged fan base, with millions of fans tuning in to watch the matches and engaging with the tournament on social media.

"A Content Analysis of Media Coverage of the Indian Premier League" by Dr. Manish Verma: This study examines media coverage of the IPL. The study finds that the IPL receives extensive media coverage, with a focus on player performance, team strategy, and controversies.

These studies, along with others, have contributed to a better understanding of the impact of the IPL on cricket, the economy, and Indian society. However, there is still much to learn about the tournament, and a report on IPL 2008-2020 could build on these previous studies and provide new insights into the tournament's impact and challenges.

### 3.3 Gaps in the Literature

While there have been several studies on the Indian Premier League (IPL) cricket tournament, there are still some gaps in the literature. Some of the gaps include:

Long-term impact of the IPL: While some studies have examined the economic and social impact of the IPL, there is still a lack of research on the long-term impact of the tournament. More research is needed to understand the sustained impact of the IPL on the Indian economy, cricket, and society.

Player experiences in the IPL: Most studies on the IPL focus on the tournament's impact on the sport and the economy, but there is still limited research on the experiences of players in the tournament. More research is needed to understand the experiences of players, including their motivations for participating in the tournament, their experiences with franchise owners, and the impact of the tournament on their careers.

Impact of the IPL on regional cricket: While the IPL has had a significant impact on Indian cricket, there is still limited research on its impact on regional cricket. More research is needed to understand how the IPL has affected the development of cricket in different regions of India.

Ethical issues in the IPL: While there have been some studies on the ethical issues in the IPL, such as match-fixing and player misconduct, there is still a lack of research on the underlying causes of these issues and their impact on the tournament's sustainability. More research is needed to understand the root causes of ethical issues in the IPL and to develop strategies for addressing them.

Fan experiences in the IPL: While there have been some studies on fan engagement in the IPL, there is still a lack of research on the experiences of different types of fans, including hardcore fans, casual fans, and non-cricket fans. More research is needed to understand the motivations and experiences of different types of fans and how the IPL can better engage with them.

The Indian Premier League, commonly known as the IPL, has emerged as one of the most popular and lucrative cricket leagues in the world. Launched in 2008 by the Board of Control for Cricket in India (BCCI), the IPL has revolutionized the sport of cricket and has become a global phenomenon, attracting top players and massive audiences from around the world.

Over the years, the IPL has grown in popularity, with an increasing number of teams, players, and viewers. The league has not only become a platform for showcasing cricketing talent, but it has also become a source of entertainment, glamour, and business. With its high-octane matches, star-studded teams, and massive fan following, the IPL has become a significant player in the global sports and entertainment industry.



In this report, we aim to provide an overview of the IPL from 2008 to 2020. We will explore the history, growth, and impact of the IPL, as well as its key players, teams, and performances. We will also examine the role of the IPL in the development of cricket and its impact on the sports industry in India and around the world.

Through this report, we hope to provide insights into the evolution of the IPL and its significance in the sports and entertainment industry. We believe that this report will be useful to cricket fans, sports enthusiasts, and professionals interested in the business of sports.

## 1. Scope of the Analysis

The scope of analysis for the IPL 2008-2020 report will cover several key areas of the league's history, growth, and impact. These areas include:

**History and Evolution:** We will analyze the evolution of the IPL from its inception in 2008 to the present day. This will include a detailed examination of the league's format, rules, and regulations, as well as the changes that have been made over the years.

**Performance Analysis:** We will analyze the performance of the teams and players in the IPL from 2008-2020. This will include a review of key statistics, such as batting and bowling averages, as well as an assessment of the top performers and their impact on the league.

**Financial Analysis:** We will analyze the financial aspects of the IPL, including the revenue streams, team valuations, and the impact of the league on the Indian economy. This will also include a review of the sponsorship deals, advertising revenue, and media rights deals.

**Social Impact:** We will analyze the social impact of the IPL, including its role in promoting cricket, its impact on the Indian sports industry, and its contribution to the overall development of sports in India.

**Future Prospects:** We will analyze the future prospects of the IPL and its potential growth and impact in the coming years. This will include a review of the league's expansion plans, the impact of new teams and players, and the potential for the league to continue to grow and evolve.

Overall, this report will provide a comprehensive analysis of the IPL from 2008-2020, covering a wide range of areas, including history, performance, finance, social impact, and future prospects.

### 3. Existing System

#### i. Drawbacks or limitations of existing system

The Indian Premier League (IPL) has enjoyed unprecedented success since its inception in 2008, becoming one of the most popular and lucrative cricket leagues in the world. However, as with any complex system, there are some limitations and drawbacks that need to be considered in order to ensure the long-term sustainability and success of the league.

One major limitation of the IPL is the inconsistent scheduling of matches. With matches being played at odd hours and the league schedule being cramped, it can be difficult for fans to follow the league regularly. This can also lead to player fatigue and injuries, which can impact the quality of the matches and the players' long-term careers.

Another limitation of the IPL is the overdependence on star players. While the league has attracted some of the biggest names in cricket, there are concerns that team owners are paying exorbitant amounts for big names rather than focusing on team balance and strategy. This can lead to a lack of opportunities for young players and a lack of team cohesion, which can impact the overall quality of the league.

Transparency is another area of concern for the IPL. There have been allegations of lack of transparency in the auction process and team selection, which can lead to accusations of nepotism and favoritism. This can damage the league's reputation and undermine fans' confidence in the fairness of the league.

Player burnout is another limitation of the IPL. The league's intensive schedule can lead to players switching between different formats of the game and playing in multiple leagues, which can lead to injury and fatigue. This can impact the quality of the matches and the players' long-term health and career prospects.

Finally, there are concerns about financial imbalances between the teams. Some teams have much higher budgets and resources than others, which can lead to an uneven playing field and lack of competition. This can also impact the long-term sustainability of the league, as weaker teams may struggle to attract sponsors and fans.

Overall, while the IPL has been successful in many ways, it is important to address these limitations and drawbacks in order to ensure the long-term sustainability and success of the league. This may involve making changes to the league schedule, promoting team balance and strategy, increasing transparency, addressing player burnout, and ensuring financial balance between the teams. By addressing these issues, the IPL can continue to grow and evolve, attracting top talent and entertaining fans from around the world.

#### 4. Future scope

The Indian Premier League (IPL) has become one of the most lucrative and popular cricket leagues in the world. It was first introduced in 2008, and over the years, it has evolved into a massive platform that showcases the talents of some of the best cricket players from all over the world. With the advent of the IPL, the cricketing world has witnessed a revolution that has not only changed the way the game is played but also how it is perceived.

The IPL has had a significant impact on cricket, not just in India but globally. One of the most notable changes is the introduction of the T20 format, which has become a popular alternative to the longer formats of the game. T20 cricket has been credited with making cricket more accessible to the masses, particularly in countries like India where cricket is a religion. The IPL has been a significant contributor to the growth of T20 cricket and has led to the emergence of a new breed of cricketers who specialize in the format.

Another significant impact of the IPL has been the globalization of cricket. The league has attracted some of the best cricketing talents from around the world, making it a truly global tournament. The IPL has also provided a platform for players from smaller cricketing nations to showcase their skills, thereby promoting the growth of the game in those countries. The success of the IPL has also led to the emergence of other T20 leagues around the world, creating more opportunities for players to ply their trade.

The IPL has been instrumental in bringing cricket to the masses. The league has attracted a huge fan following, with millions of people tuning in to watch the matches live. The league has also created a carnival-like atmosphere, with music, cheerleaders, and other entertainment activities adding to the excitement. The IPL has become more than just a cricket tournament; it has become a cultural phenomenon that transcends boundaries.

Over the years, the IPL has evolved to become more than just a cricket league. It has become a massive platform for businesses to promote their products and services. The league has attracted some of the biggest brands from around the world, who have used the IPL to reach out to a massive audience. The IPL has become a lucrative business, generating massive revenue for its stakeholders.

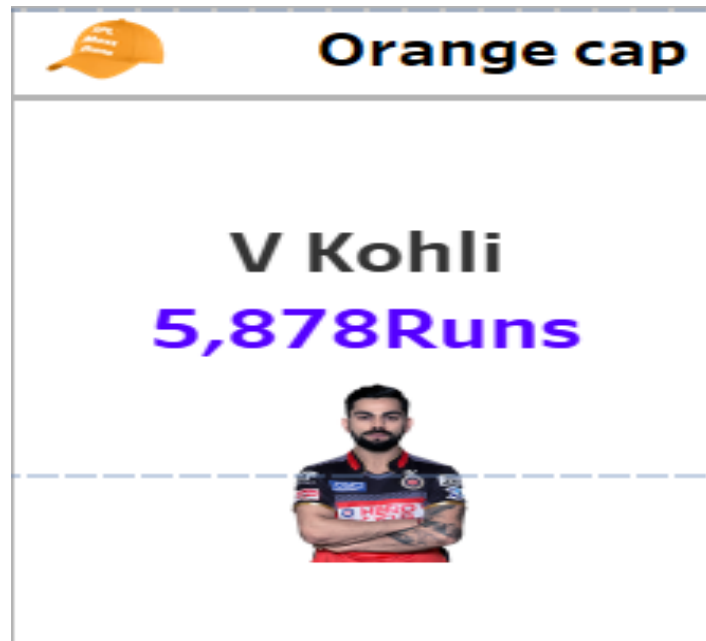
The success of the IPL has also led to the emergence of a new breed of cricket administrators who specialize in running T20 leagues. The IPL has become a model for other T20 leagues to follow, with its innovative marketing strategies and player management systems. The success of the IPL has also led to the emergence of new business opportunities in the cricketing world, creating more jobs and opportunities for people associated with the game.

In conclusion, the IPL has had a massive impact on cricket, both in India and globally. The league has changed the way cricket is played, perceived, and marketed. It has created a new breed of cricketers who specialize in T20 cricket, and has brought the game to the masses. The IPL has become a massive platform for businesses to promote their products and services, and has led to the emergence of new business opportunities in the cricketing world. The IPL is a cultural phenomenon that has transcended boundaries and has become an integral part of India's sporting landscape.

### **DATA ANALYSIS**

**Objective 1 – Displaying player scored most runs.**

**Description** – The objective is to analyze the player scored most run in a specific season..



**Objective 2 – Displaying player takes most wickets.**

**Description** – The objective is to analyze the player takes most wickets in a particular season.



**SL Malinga**  
**170Wickets**



**Objective 3 – Displaying the winner of specific season.**

**Description** – The objective is to analyze the winner of title in a specific season.



**Title Winner**

## Mumbai Indians



**Objective 4 – Displaying the tournament sixes.**

**Description** – The objective is to analyze the tournament sixes in a specific season.

### Tournaments 6's

**8,902**



twinkl.com

**Objective 5 – Displaying the tournament sixes.**

**Description** – The objective is to analyze the tournament fours in a specific season.

# Tournaments 4's

21,908



twinkl.com

## Dashboard

