JETIR.ORG ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue
JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR)
An International Scholarly Open Access, Peer-reviewed, Refereed Journal

CRICKET SCORE BOARD

[1]Neha Markandwar, [2]Prof. Najeefa Nasreen
[1]PG Student, [2]Assistant Professor
[1,2]Department of Computer Science
[1,2]G.H.Raisoni University, Amravati, India

Abstract: An abstract of a cricket score board typically provides a concise summary of the key statistical information of a cricket match. This may include details such as the total runs scored by each team, the number of wickets taken, the overs bowled, and possibly the individual performances of notable players. The abstract aims to give readers a quick overview of the match's progress and outcome without delving into the full details of every play or moment. The cricket scoreboard stands as an integral component of the game, serving as the primary means through which spectators, players, and officials track the progress and outcomes of matches. This paper delves into the multifaceted aspects of cricket scoreboards, spanning their historical evolution, technological advancements, user interface design, and broader implications for fan engagement and match dynamics.

Index Terms: UX, augmented Reality,

I. INTRODUCTION

After football, cricket is the game that is most adored. Beginning in the fifteenth century, the sport is played in England. With the number of fans growing globally, cricket may soon surpass football as the sport with the largest fan base. It is no longer simply a game in India today; it has become a religion. There are three main formats. 50 overs in a One Day International match are played in a single day. The second format is the test format, which was used in earlier iterations of the game. It is played over five days and includes of two innings from each team, with each innings containing 80 to 90 overs. For five days, the team must deliver regularly. In this extremely difficult game type, a player's endurance strength, patience, and mental toughness are crucial. The Twenty20 format of cricket is the third and most recent one. This style was developed in 2006, and India won the inaugural world championship in 2007. The short game, which has 20 over, is finished in under three hours. Each team has 20 over to play, and there are only 2 teams involved. Due to the IPL, the t20 format is extremely popular in India. The popularity of the t20 format in India is a result of this event. As IPL viewers, people create their own predictions when watching a certain match. They base these predictions on the facts they have available and use various statistics and records to determine who will win. As a result, there is a significant market for algorithms that forecast the best score and winning team, which is more crucial. We shall make predictions for every IPL match that has already been played. Machine learning techniques are used in this process to anticipate the outcomes of the matches.

II. RELATED WORK

The cricket scoreboard serves as a visual representation of the ongoing cricket match, displaying crucial statistical information that allows spectators, players, and officials to track the progress of the game in real-time. It is an integral part of cricketing events, providing a snapshot of the match's dynamics, including runs scored, wickets taken, overs bowled, and other relevant details.
The introduction of the cricket scoreboard dates back to the early days of cricket, evolving from simple manual scoring methods to modern electronic scoreboards equipped with advanced technology. Initially, scores were maintained manually on a physical board using chalk or markers, with a designated scorer responsible for updating the information as the game progressed.
User Experience (UX) Design: Studies focus on optimizing the user experience of cricket scoreboards, ensuring that they meet the needs and preferences of different user groups, such as spectators, players, coaches, and officials. This involves conducting user research, gathering feedback, and iteratively refining the design to enhance usability, accessibility, and overall satisfaction.
Integration with Other Systems: Research explores the integration of cricket scoreboards with other systems and technologies, such as broadcasting platforms, mobile applications, stadium infrastructure, and data analytics tools. This enables seamless communication, data sharing, and coordination between different stakeholders involved in cricket matches.

Accessibility and Inclusivity: Efforts are made to ensure that cricket scoreboards are accessible to a wide range of users, including those with disabilities or special needs. This may involve incorporating features such as alternative text, screen readers, keyboard navigation, and adjustable settings to accommodate diverse user requirements.

III. PROPOSED WORK

Proposed work for cricket scoreboards could involve several innovative approaches aimed at enhancing the viewing experience, providing deeper insights into the game, and improving accessibility. Here are some potential areas for proposed work:
Augmented Reality (AR) Integration: Explore the integration of augmented reality technology into cricket scoreboards to provide immersive experiences for spectators. AR overlays could display live player statistics, replays, and interactive elements directly on viewers' mobile devices or smart glasses, enhancing engagement and interactivity.
Predictive Analytics: Develop predictive analytics models that use historical match data, player performance metrics, and contextual factors to forecast match outcomes and key performance indicators in real-time. These predictive insights could be displayed on the scoreboard, providing viewers with additional context and anticipation during the game.
Dynamic Visualizations: Design dynamic visualizations that adapt to the evolving dynamics of the game, such as real-time graphs showing momentum shifts, scoring patterns, and strategic decisions. These visualizations could be tailored to different phases of the match, providing deeper insights into team strategies and player performances.
Predictive Analytics: Develop predictive analytics models that use historical match data, player performance metrics, and contextual factors to forecast match outcomes and key performance indicators in real-time. These predictive insights could be displayed on the scoreboard, providing viewers with additional context and anticipation during the game.
Dynamic Visualizations: Design dynamic visualizations that adapt to the evolving dynamics of the game, such as real-time graphs showing momentum shifts, scoring patterns, and strategic decisions. These visualizations could be tailored to different phases of the match, providing deeper insights into team strategies and player performances.

IV. DATA PRE-PROCESSING

A data pre-processor for a cricket scoreboard would be responsible for preparing and formatting raw data collected during a cricket match into a structured format that can be displayed on the scoreboard. Here's a simplified outline of the data pre-processing steps:

- **Data Collection**: Raw data is collected from various sources, including manual scoring, electronic sensors, or live feeds from broadcasting systems. This data includes information such as runs scored, wickets taken, overs bowled, player statistics, and match events.
- **Data Parsing**: The collected data is parsed to extract relevant information and convert it into a standardized format. This may involve splitting text strings, extracting numerical values, and identifying key data points such as runs scored per ball, wickets taken per over, and player IDs.
- **Data Cleaning**: The parsed data is cleaned to remove any inconsistencies, errors, or redundant information. This includes handling missing values, correcting data discrepancies, and standardizing data formats to ensure consistency and accuracy.
- **Data Aggregation**: The cleaned data is aggregated to calculate summary statistics and aggregate metrics such as team totals, player averages, run rates, and match outcomes. This involves grouping data by relevant attributes such as innings, teams, players, and match events.
- **Data Formatting**: The aggregated data is formatted according to the requirements of the scoreboard display system. This may involve organizing data into tables, lists, or structured objects, and converting numerical values into appropriate units and formats for display.
- **Data Formatting**: The aggregated data is formatted according to the requirements of the scoreboard display system. This may involve organizing data into tables, lists, or structured objects, and converting numerical values into appropriate units and formats for display.

.

V. RESEARCH METHDOLOGY

Research methodology for cricket scoreboard enhancements involves a systematic approach to gathering, analysing, and implementing improvements. Here's a generalized methodology that could be applied:
Identify Stakeholders and Objectives: Determine the key stakeholders involved, such as broadcasters, cricket boards, technology providers, and fans. Clarify the objectives of enhancing the scoreboard, whether it's improving viewer engagement, providing more comprehensive data analysis, or enhancing the overall viewer experience.
Literature Review: Conduct a comprehensive review of existing literature, research papers, and case studies related to cricket scoreboards, technology advancements, viewer preferences, and trends in sports broadcasting. This will provide valuable insights into existing practices and potential areas for improvement.
Market Analysis: Analyse the current market landscape for cricket scoreboards, including the technologies being used, competitive offerings, and emerging trends. Identify gaps and opportunities for innovation based on market needs and consumer preferences.

Surveys and Focus Groups: Conduct surveys and focus groups with cricket fans, broadcasters, players, and other stakeholders to gather feedback on the current scoreboard experience and identify areas for improvement. Explore preferences regarding data visualization, interactivity, and additional features desired by viewers.
Technology Assessment: Evaluate the latest technologies that can be integrated into cricket scoreboards, such as augmented reality, real-time data analytics, biometric sensors, and social media integration. Assess the feasibility, cost, and potential impact of implementing these technologies.

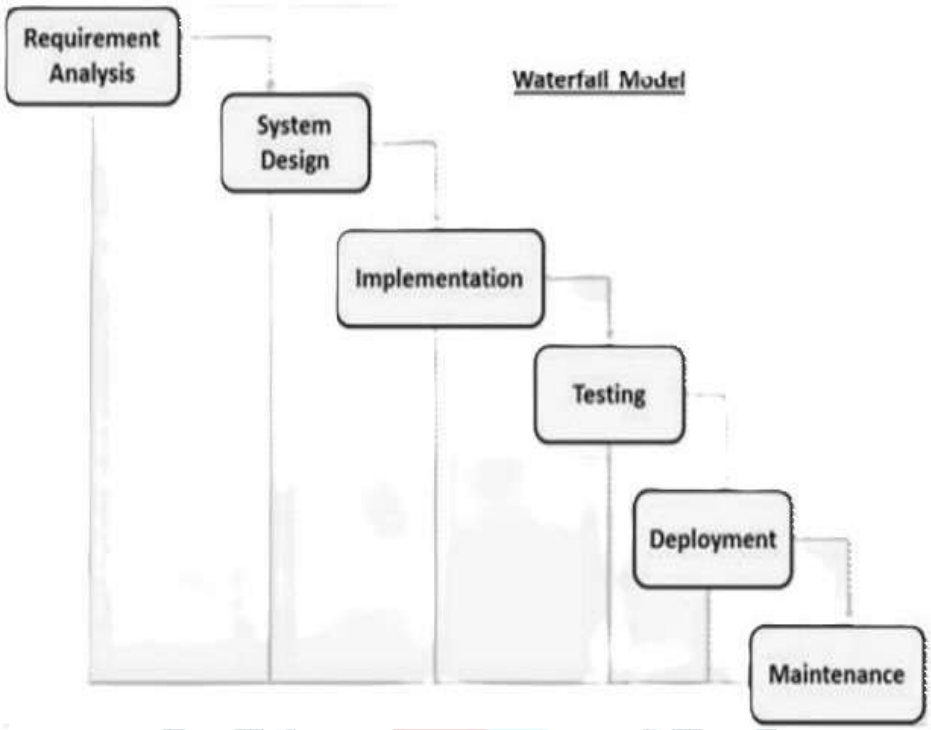

Fig 1. The Waterfall Model

VI. RESULT AND DISCUSSION

Analysing a cricket scoreboard involves various aspects, including individual player performances, team statistics, and overall match dynamics. Here's a breakdown of what you might consider when analysing a cricket scoreboard: Team Scores: Start by looking at the total runs scored by each team. This gives an immediate idea of who performed better with the bat.

- **Run Rate:** Calculate the run rate of each team. Run rate is the average number of runs scored per over. It helps understand the scoring rate and momentum of the innings.
- **Wickets fall:** Note how many wickets each team has lost. This indicates the stability of the batting line-up and how many wickets the bowling team needs to take to end the innings.
- **Individual Scores:** Check the individual scores of batsmen. Highlight notable performances, such as centuries or half-centuries. Also, look for partnerships between batsmen, as partnerships are crucial in building a strong total.
- **Strike Rates:** Evaluate the strike rates of batsmen. A high strike rate indicates aggressive batting, while a lower strike rate might suggest cautious play.

Analyse the bowling figures of each bowler. Look at the number of overs bowled, runs conceded, wickets taken, and economy rates. Identify standout bowlers who took crucial wickets or maintained tight control over the scoring.

- **Extras:** Pay attention to the extras conceded by each team, including wides, no-balls, and byes. Extras can significantly impact the outcome of the match, as they provide additional runs to the batting side.
- **Fielding Performance:** Consider any exceptional catches, run-outs, or fielding errors that occurred during the match. Good fielding can save runs and create opportunities for wickets.
- **Match Context:** Contextualize the scoreboard analysis within the match situation. For example, if a team scored a high total in the first innings, consider how the pitch conditions might have influenced their performance and how the chasing team is responding.

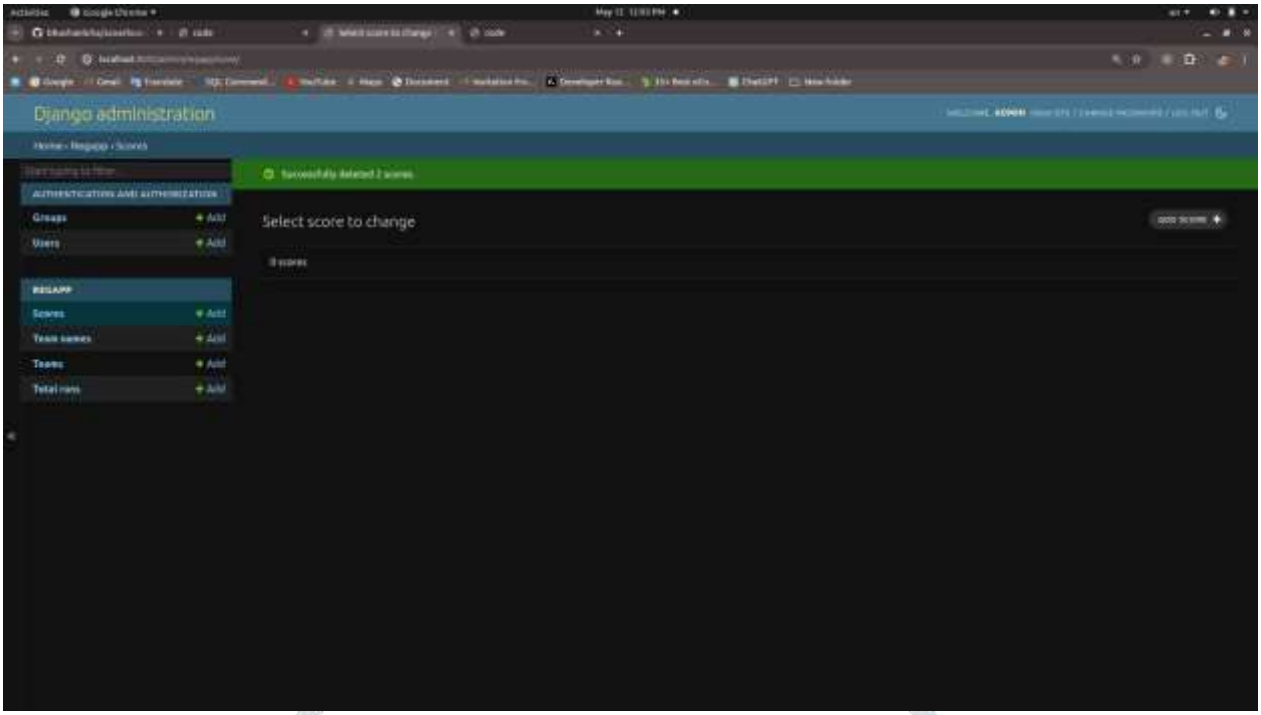

Fig 1. Home Page

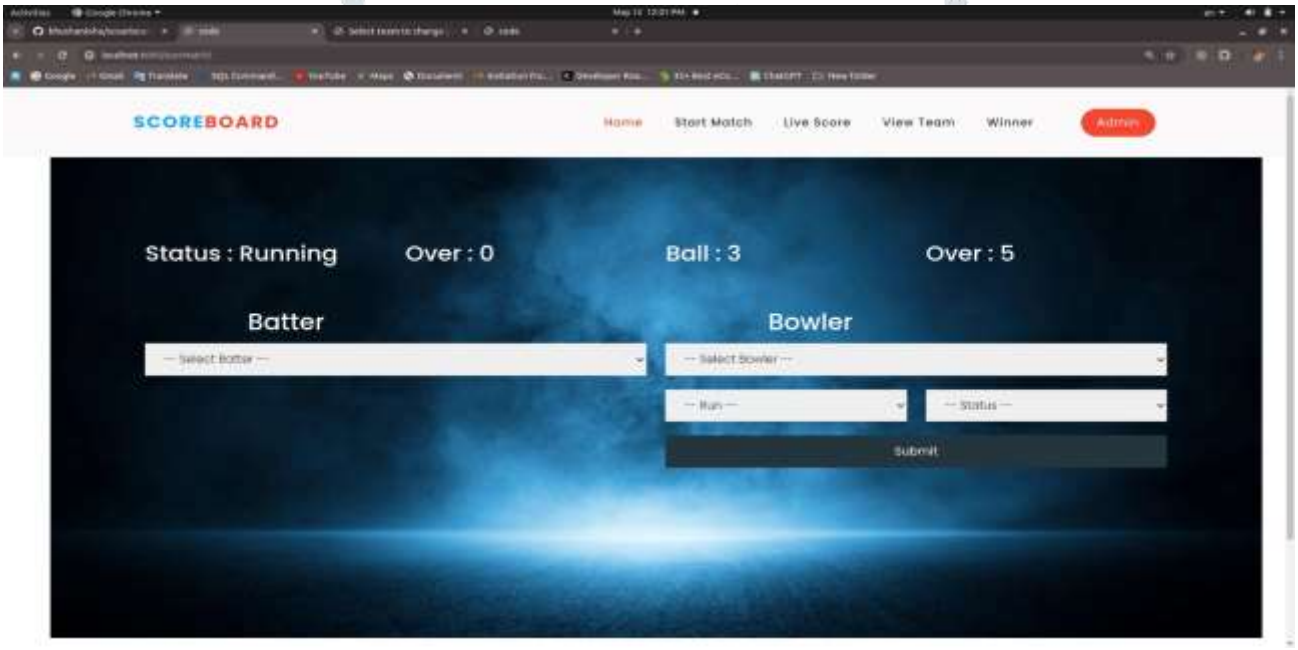

Fig 2. Admin Panel

VIII. CONCLUSION

Analysing a cricket scoreboard involves various aspects, including individual player performances, team statistics, and overall match dynamics. Here's a breakdown of what you might consider when analysing a cricket scoreboard:

Team Scores: Start by looking at the total runs scored by each team. This gives an immediate idea of who performed better with the bat. Run Rate: Calculate the run rate of each team. Run rate is the average number of runs scored per over. It helps understand the scoring rate and momentum of the innings. Wickets fall: Note how many wickets each team has lost. This indicates the stability of the batting line-up and how many wickets the bowling team needs to take to end the innings. Individual Scores: Check the individual scores of batsmen. Highlight notable performances, such as centuries or half-centuries. Also, look for partnerships between batsmen, as partnerships are crucial in building a strong total.

Team Performance: Assess the overall performance of each team based on their total runs scored, wickets lost, and run rate. Determine which team had the upper hand in batting and fielding.

Key Players: Identify the standout performers from both teams, considering individual batting and bowling performances. Highlight players who made significant contributions to their team's success.

Match Summary:

- **Match Type:** (e.g., ODI, Test, T20)
- **Teams:** Team A vs. Team B
- **Venue:** (Stadium, City, Country)
- **Date:** (Day/Month/Year)

Final Scores:

- **Team A:**
  - **Total Runs:** (e.g., 250/8 in 50 overs)
  - **Key Performers:**
    - **Top Batsman:** (e.g., Player X - 75 runs off 50 balls)
    - **Top Bowler:** (e.g., Player Y - 4 wickets for 30 runs)

- **Team B:**
  - **Total Runs:** (e.g., 200 all out in 45 overs)
  - **Key Performers:**
    - **Top Batsman:** (e.g., Player Z - 60 runs off 55 balls)
    - **Top Bowler:** (e.g., Player A - 3 wickets for 40 runs)

Result:

- **Winner:** Team A won by 50 runs (or by wickets if chasing)
- **Player of the Match:** (e.g., Player X for a match-winning innings or performance)

Additional Highlights:

- **Best Partnership:** (e.g., Player X and Player Y - 120 runs for the 3rd wicket)
- **Notable Performances:** (e.g., A hat-trick by Player B or a century by Player C)

Points/Series Standings (if applicable):

- **Series/Tournament Standings:** (e.g., Team A leads the series 2-1 or points table details)

REFERENCES

[1]. The Business of Cricket" by Tim B. Swartz (2006) - This book provides insights into the business side of cricket, including governance structures and management practices within cricket boards.

[2] The Economics of Cricket by Nalin Mehta and Boria Maunder (2019) - This book offers a comprehensive analysis of the economic aspects of cricket, which can provide valuable background information for understanding the challenges and opportunities in cricket board management.

[3]Official Cricket Boards: Websites of cricket boards like the International Cricket Council (ICC), Board of Control for Cricket in India (BCCI), Cricket Australia (CA), etc., often provide up-to-date scores and statistics.

[4] Governance and the Governance of Sport" edited by Neil J. Wood and Russell Hoye (2007) - This collection of essays explores governance issues in sports organizations, which can be relevant for understanding the governance structure and practices of cricket boards.

[5] International Cricket Council (ICC) Reports - Reports published by the ICC, particularly those related to governance, development programs, and strategic plans, can offer valuable insights into the functioning of cricket boards at the international level.

[6] Usha Kosarkar, Gopal Sakarkar, Shilpa Gedam (2022), "Revealing and Classification of Deepfakes Videos Images using a Customize Convolution Neural Network Model", *International Conference on Machine Learning and Data Engineering (ICMLDE)*, 7th & 8th September 2022, 2636-2652, Volume 218, PP. 2636-2652, https://doi.org/10.1016/j.procs.2023.01.237

[7] Usha Kosarkar, Gopal Sakarkar (2023), "Unmasking Deep Fakes: Advancements, Challenges, and Ethical Considerations", *4th International Conference on Electrical and Electronics Engineering (ICEEE)*,19th & 20th August 2023, 978-981-99-8661-3, Volume 1115, PP. 249-262, https://doi.org/10.1007/978-981-99-8661-3_19

[8] Usha Kosarkar, Gopal Sakarkar, Shilpa Gedam (2021), "Deepfakes, a threat to society", *International Journal of Scientific Research in Science and Technology (IJSRST)*, 13th October 2021, 2395-602X, Volume 9, Issue 6, PP. 1132-1140, https://ijsrst.com/IJSRST219682

[9] Usha Kosarkar, Gopal Sakarkar (2024), "Design an efficient VARMA LSTM GRU model for identification of deep-fake images via dynamic window-based spatio-temporal analysis", *International Journal of Multimedia Tools and Applications, 8th May 2024, https://doi.org/10.1007/s11042-024-19220-w*