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

Online live cricket scoring website

[1]K T Krishna Kumar, [2]Shaik Hasan Ali,
[1]Associate Professor, [2]MCA Final semester,
[1]Masters Of Computer Applications,
[1]Sanketika Vidya Parishad Engineering College, Vishakhapatnam, Andhra Pradesh, India

Abstract: CRICKET. In India, It's more of an emotion than a sport. In a country where star cricketers are considered as Gods by many, cricket surely means business and a lot of money. There are a lot of online services which are already making huge money by offering live scores, statistics and live streaming. We are developing an online cricket live scoring website which contains all statistics of every match of every series & every tournament around the world and also live scores as premium content unlike other websites which contain either statistics or live scores. It contains interactive use friendly UI which attracts a lot of users who wants everything at a single place. This abstract outline the development and features of an online cricket live scoring website designed to provide real-time updates and comprehensive coverage of cricket matches. The website aims to cater to cricket enthusiasts, players, and fans worldwide by offering a user-friendly platform for accessing live scores, statistics, and match analyses.

IndexTerms **- Cricket Live Scores, Real-time Updates, Match Statistics, User-Friendly Interface, Comprehensive Coverage, Interactive Platform, Web App Development, Scalable Technology.**

I. INTRODUCTION

Creating an online live cricket scoring website involves several key steps. First, define features like live score updates, player stats, and match schedules, and choose a technology stack (e.g., React for front-end, Node.js for back-end). Design your database schema to handle match details and real-time updates using tools like Web Sockets. Develop APIs to manage data and integrate with live score providers, ensuring the front-end displays updates seamlessly. Finally, deploy your application on a hosting platform, set up CI/CD pipelines, and monitor performance for ongoing maintenance and improvements.

1.1 Existing System

As an MCA 4th semester student working on an online live cricket[8] scoring project, I have encountered several real-time challenges that reflect the complexities of the existing landscape. One of the foremost challenges is ensuring the accuracy and speed of real-time updates, as any delay or inaccuracy can diminish the user experience and credibility of the platform. Integrating live data feeds from various cricket [4] boards and leagues across the globe presents another significant hurdle due to the diverse formats and standards. Scalability is a critical concern, especially during high-traffic events like major tournaments [9] or matches involving popular teams [5], requiring robust backend architecture to handle millions of simultaneous users. The implementation of a user-friendly and responsive UI/UX design is essential to cater to users accessing the platform from different devices and screen sizes. Ensuring data security and privacy is paramount, particularly when dealing with user information and subscription [10] models. Handling advertisements and monetization without compromising the user experience is another delicate balance to achieve. Additionally, providing comprehensive statistical analysis and insights necessitates sophisticated algorithms and data processing techniques. Maintaining server uptime and reliability during peak times requires continuous monitoring and optimization. Integrating multilingual support to cater to a global audience adds another layer of complexity. Compliance with various international regulations and standards is crucial to avoid legal issues. Another challenge is offering personalized content and notifications to enhance user engagement without overwhelming them. Keeping up with the latest technological advancements and incorporating them into the platform is an ongoing requirement. Ensuring smooth collaboration among the development team, designers, and data providers is vital for timely and efficient project execution. Lastly, obtaining user feedback and iteratively improving the platform based on their inputs is essential for sustained success in the competitive market of online cricket scoring [8].

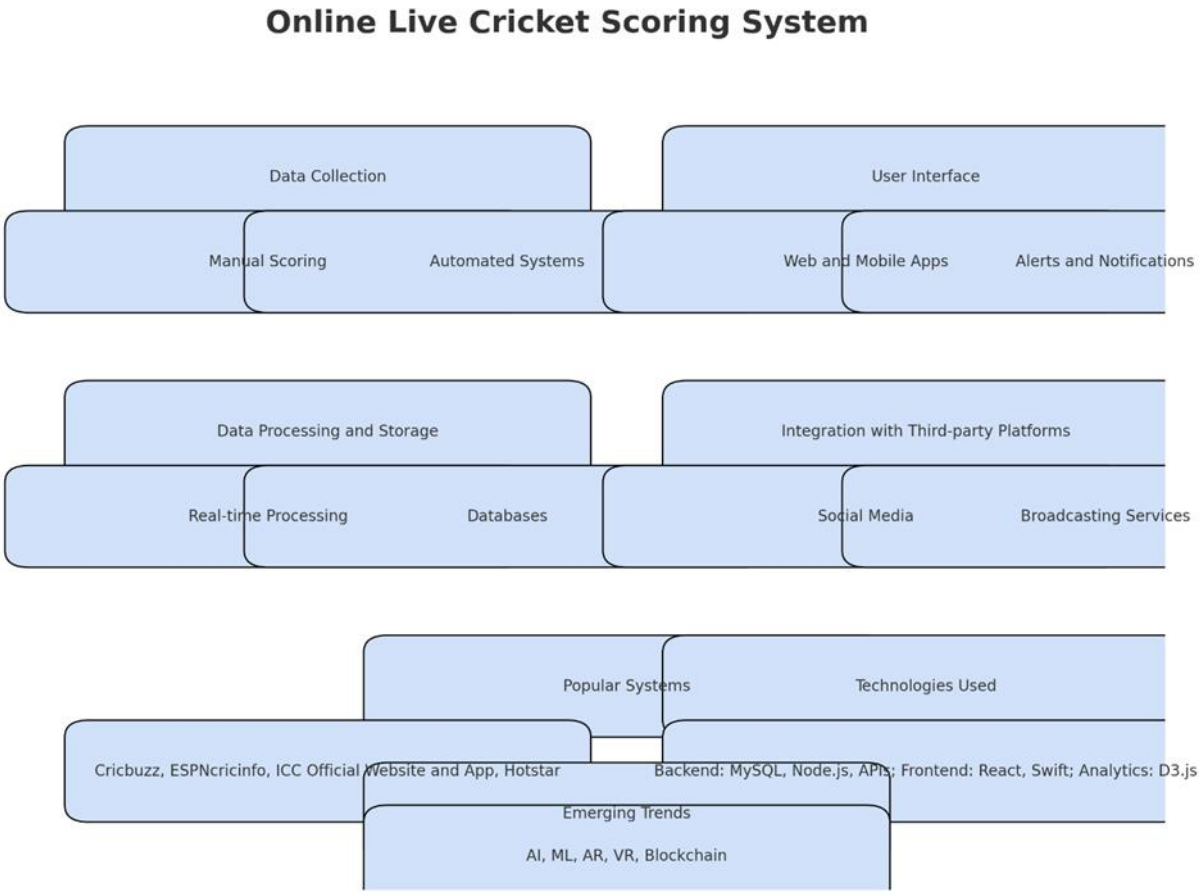

Figure 1: Existing system

1.1.1 Challenges:

• Real-time Data Accuracy and Speed: Ensuring live updates are accurate and delivered without delay to maintain credibility and user satisfaction.

• Scalability During High Traffic Events: Building a robust backend architecture capable of handling millions of users simultaneously during major tournaments and popular matches.

• User-Friendly and Responsive UI/UX Design: Creating an interface that is intuitive and responsive across various devices and screen sizes to cater to a diverse user base.

• Data Security and Privacy: Protecting user information and ensuring secure transactions, especially when dealing with subscriptions and personal data.

• Compliance with International Regulations: Adhering to various legal standards and regulations across different countries to avoid legal issues and ensure smooth operation globally.

1.2 Proposed System

Developing an online live cricket[8] scoring website offers numerous advantages that significantly enhance the user experience. One of the primary benefits is the convenience of accessing real-time updates and comprehensive match statistics from a single platform. This all-in-one approach saves users time and effort compared to visiting multiple websites for different types of information. An interactive and user-friendly interface further enhances user engagement, making it easier for cricket enthusiasts to navigate and find the information they need. The ability to provide personalized content and notifications keeps users informed about their favorite teams and matches[8], increasing retention and loyalty. Offering detailed match analyses and insights caters to both casual fans and serious analysts, adding value for a wide audience. The global reach of an online platform allows fans from different regions to stay connected with cricket events worldwide, breaking geographical barriers. Integration with social media enables users to share updates and engage in discussions, fostering a community of cricket lovers[8]. Monetization opportunities through subscriptions, advertisements, and premium content can generate substantial revenue. The use of advanced technologies ensures a scalable and reliable service, even during high-traffic periods. Regular updates and improvements based on user feedback help maintain a high level of satisfaction and relevance. The website can also serve as a valuable resource for journalists and analysts, providing them with up-to-date and accurate information. Data security measures protect user information, building trust and confidence in the platform. Multilingual support broadens the audience base, catering to cricket fans from diverse linguistic backgrounds. Compliance with international regulations ensures smooth operation and legal security. Overall, the development of an online live cricket scoring[8] website creates a dynamic, engaging, and profitable ecosystem for all stakeholders involved

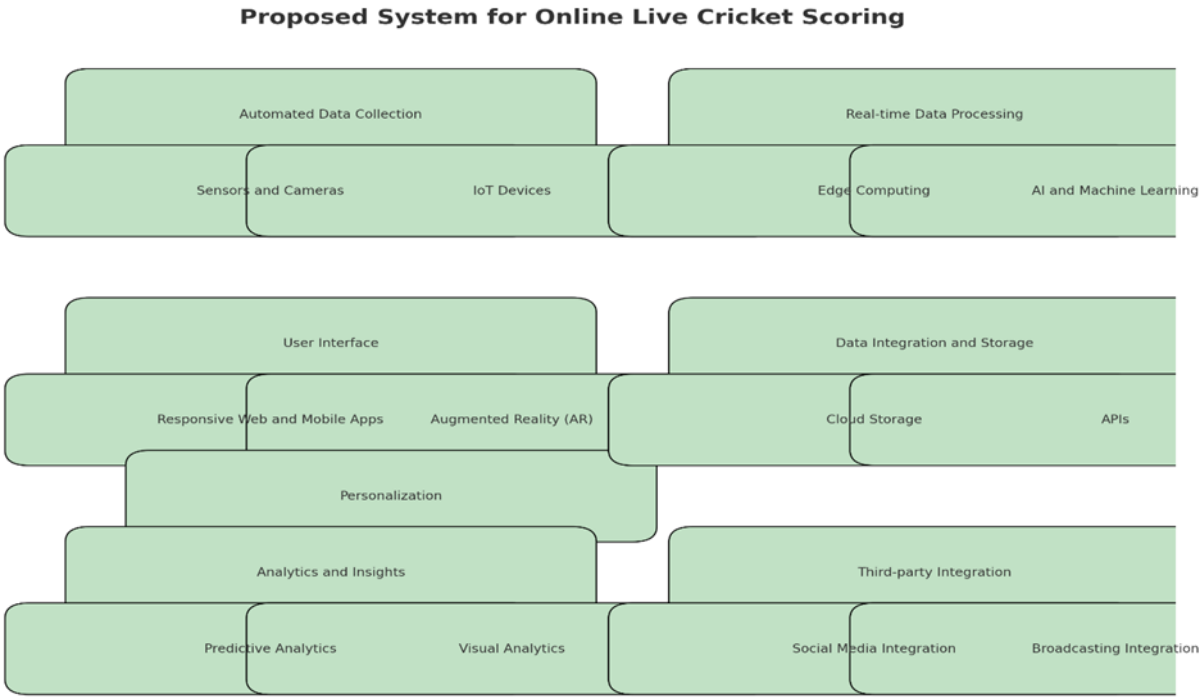

Figure 2 : Proposed system

1.2.1 Advantages

• Real-Time Updates and Comprehensive Statistics: Users can access live scores and detailed match statistics from a single platform, enhancing convenience and user experience.

• User-Friendly and Interactive Interface: An intuitive design makes it easy for users to navigate and find the information they need, increasing engagement and satisfaction.

• Global Reach and Accessibility: Fans from different regions can stay connected with cricket events worldwide, breaking geographical barriers and fostering a global community of cricket enthusiasts.

• Personalized Content and Notifications: Tailored updates about favorite teams and matches keep users informed and engaged, boosting retention and loyalty.

•Monetization Opportunities: The platform can generate substantial revenue through subscriptions.

II. LITERATURE REVIEW

2.1 Architecture

The architecture of an online live cricket[8] scoring website is designed to ensure high performance, scalability, and user satisfaction. At the core, a robust backend system is essential, powered by frameworks like Django or Node.js, which handle real-time data processing and server-side operations efficiently. The frontend utilizes modern JavaScript frameworks such as Angular or React to create a dynamic and responsive user interface. Data storage is managed using scalable databases like PostgreSQL or MongoDB, which handle vast amounts of match statistics and user data. Real-time updates are facilitated through WebSocket connections or push notifications, ensuring users receive live scores without delay[5]. A Content Delivery Network (CDN) is employed to distribute content globally, reducing latency and improving load times for users across different regions. The architecture incorporates RESTful APIs to integrate various data sources, such as live feeds from cricket boards and third-party analytics services. Microservices architecture is often adopted to allow independent deployment and scaling of different website components. Security measures, including SSL encryption, secure authentication, and regular audits, protect user data and ensure safe transactions. Load balancers distribute incoming traffic evenly across servers, maintaining optimal performance during high-traffic periods. Continuous integration and continuous deployment (CI/CD) pipelines automate testing and deployment, facilitating rapid updates and feature releases. A caching layer, using technologies like Redis, speeds up data retrieval and reduces server load. Analytics and monitoring tools track user behavior and system performance, providing insights for ongoing improvements. Multilingual support is integrated to cater to a diverse, global user base. Finally, the architecture ensures compliance with international standards and regulations, ensuring smooth operation and legal security[4]

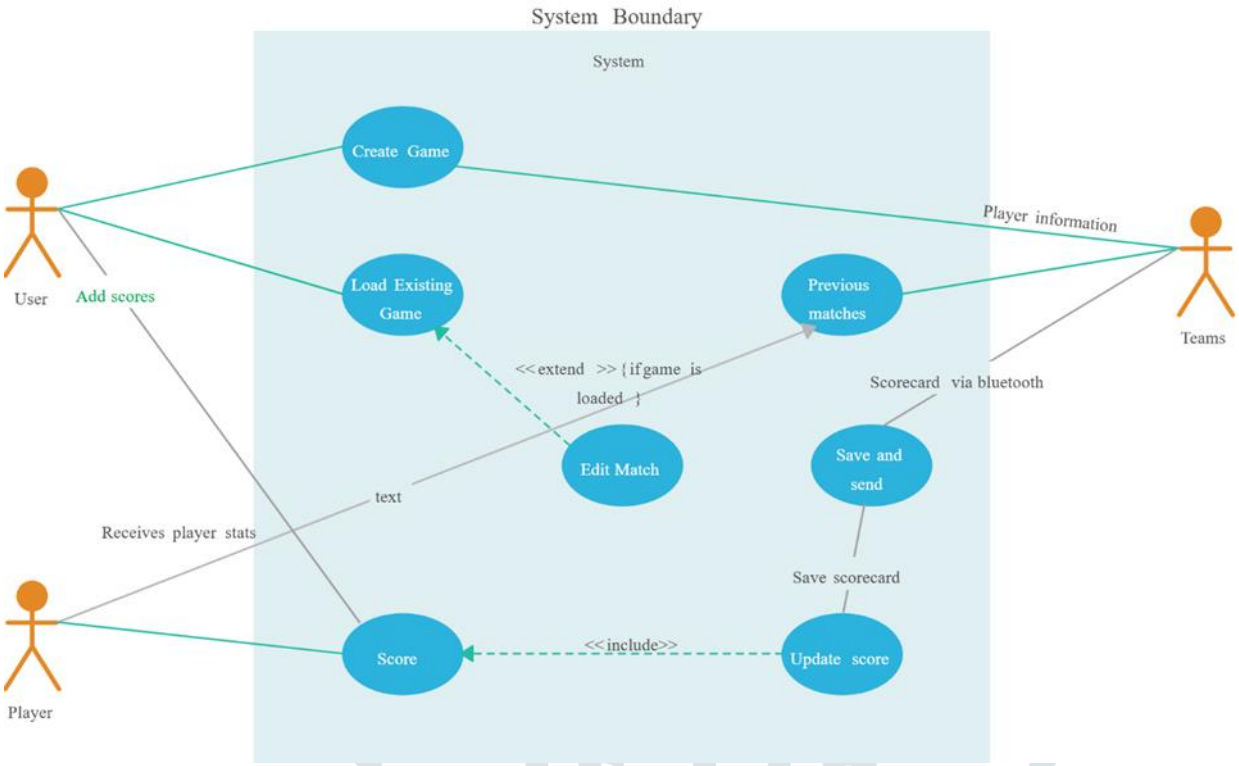

Figure 3 : Architecture diagram

2.2 Algorithm

The algorithm of an online live cricket scoring[8] website fetches live data via APIs from cricket boards, ensuring real-time accuracy with timestamping for synchronization. It efficiently stores and retrieves data using optimized structures and caching mechanisms to handle high volumes. Predictive analytics enhance engagement by analyzing historical data, while machine learning personalizes content based on user behavior. Scalability is ensured through distributed processing and load balancing across servers, integrating seamlessly with Web Sockets for real-time updates[10] . Rigorous testing and continuous updates maintain reliability and security, ensuring data integrity and a smooth user experience.

2.3 Techniques

Developing an online live cricket scoring website[11] involves using sophisticated techniques for optimal performance and user satisfaction. Real-time data streaming via WebSockets or SSE ensures instant updates without constant polling. Data parsing and normalization convert raw feeds into a consistent format, while caching with Redis or Memcached reduces latency. Load balancing distributes traffic across servers for high availability during peak times, complemented by machine learning for personalized user experiences. Security measures like encryption, CI/CD pipelines, and responsive design further enhance functionality and maintain reliability across diverse devices and global users.

2.4 Tools

Python is pivotal in developing an online live cricket scoring[8] website, leveraging Django for robust backend development with ORM capabilities and security features. Flask offers flexibility for simpler applications, while Asuncion facilitates efficient handling of real-time data streams. Libraries like Pandas and NumPy manage data processing and analytics, including historical match data and player statistics. WebSocket libraries such as Flask-Socket IO enable real-time updates, and Python's rich ecosystem of tools like scikit-learn for machine learning, pytest for testing, and Matplotlib for visualization enhance functionality and user experience. Development tools like PyCharm and Docker further streamline development and deployment, ensuring scalability and maintainability.

2.5 Methods

In developing the online live cricket [8] scoring website, several methods are employed to ensure efficient implementation and functionality. Object-Oriented Programming (OOP) principles are utilized extensively to organize code into reusable and maintainable classes, enhancing scalability and code readability. Agile development methodologies, such as Scrum or Kanban, are adopted to iteratively plan, develop, and deploy features, allowing for quick adaptation to changing requirements and continuous improvement based on user feedback. Test-Driven Development (TDD) practices are implemented to ensure code quality and reliability, with tests written before the actual code to validate expected behavior. Continuous integration and deployment (CI/CD) pipelines automate testing and deployment processes, facilitating rapid iteration and release cycles while maintaining code stability.

Finally, version control systems like Git enable collaboration among team members, allowing for concurrent development and version management throughout the project lifecycle.

III. Methodology

3.1 Input

Inputs required for developing an online live cricket[8] scoring website include real-time data feeds from cricket boards via APIs, ensuring accurate and up-to-date match information. Access to historical data is essential for predictive analytics and personalized user experiences, requiring integration with databases capable of handling large datasets. The ability to process and normalize raw data efficiently using parsing techniques ensures consistency and reliability in displaying match statistics and updates. Implementation of caching mechanisms such as Redis or Memcached optimizes data retrieval speed, enhancing user experience by reducing latency. Finally, incorporating security protocols for data encryption and user authentication safeguards sensitive information and maintains platform integrity.

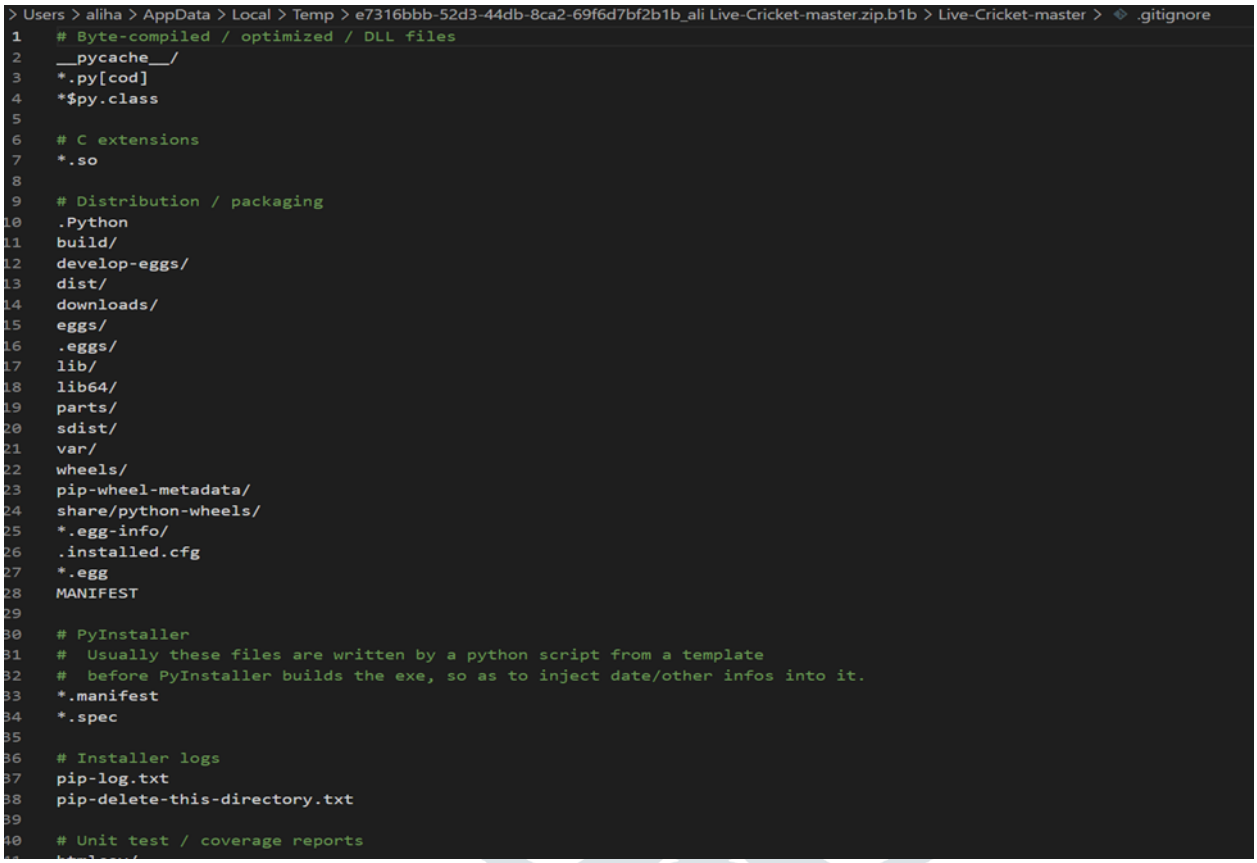

Figure 4: input screen1 image

3.2 Method of Process

The project utilizes an iterative and agile methodology to ensure efficient development and deployment of the online live cricket scoring[8] website. Agile principles such as Scrum or Kanban facilitate continuous improvement and adaptation to changing requirements through iterative cycles. Each iteration focuses on specific features or enhancements, allowing for quick feedback and adjustment based on user testing and stakeholder input. Regular sprint planning, daily stand-up meetings, and retrospective sessions ensure transparent communication and alignment among team members. This methodical approach not only accelerates development but also enhances the overall quality and responsiveness of the website to user needs.

3.3 Output

The output obtained from the online live cricket scoring [8] project encompasses a user-friendly platform providing real-time updates and comprehensive match statistics. Users benefit from instantaneous access to live scores, player statistics, and match events, enhancing their engagement and experience. The platforms performance[14] design ensures accessibility across various devices and screen sizes, catering to a broad user base. Advanced analytics and predictive models offer insights into match outcomes and player performances, enriching user interaction with personalized recommendations and notifications. Overall, the project delivers a dynamic and interactive experience that meets the diverse needs of cricket enthusiasts worldwide.

India Men VS Windies Men

Summary | Score Card | Teams

India Men 367 & 0-75 (106.4 & 16.1) overs

Windies Men: 311 & 127 (101.4 & 46.1) overs

India win by 10 wickets

Toss - Windies won the toss and elected to bat.

Batsmens	R	B	4S	6S	SR
Lokesh Rahul	33	53	1	1	62.26
Prithvi Shaw*	33	45	4	0	73.33

Bowler	O	M	R	W	WD	NB	Econ
Devendra Bishoo	4.1	0	19	0	0	0	4.56

Man of the Match — Umesh Yadav

Figure 5: output image

IV. Conclusion

Online live cricket scoring websites have revolutionized the way fans engage with the game by providing real-time updates, comprehensive statistics, and interactive features. These platforms utilize advanced technologies such as real-time data processing, AI, and machine learning to enhance accuracy and user experience. Integration with social media and broadcasting services allows for broader reach and engagement. The inclusion of visualizations, predictive analytics, and immersive experiences like AR and VR are making these platforms more dynamic and engaging. As technology continues to evolve, these systems will likely offer even more innovative features, solidifying their importance in the digital sports landscape.

V. Future Scope

The future scope of online live cricket scoring systems includes the integration of more advanced AI and machine learning algorithms to provide deeper insights and predictive analytics. Enhanced AR and VR technologies will offer immersive viewing experiences, making fans feel more connected to the game. Blockchain technology could be used to ensure data integrity and transparency in match records and statistics. Real-time player performance tracking and health monitoring using IoT devices will offer detailed analysis and improve player management. Additionally, increased personalization and interactive features will create more engaging and tailored experiences for users.

VI. Acknowledgement

Kandhati Tulasi Krishna Kumar: Training & Placement Officer with 15 years' experience in training & placing the students into IT, ITES & Core profiles & trained more than 9,500 UG, PG candidates & trained more than 350 faculty through FDPs. Authored 5 books, Guided 40+ papers in international journals for the benefit of the diploma, pharmacy, engineering & pure science graduating students. He is a Certified Campus Recruitment Trainer from JNTUA, did his Master of Technology degree in CSE from VTA and in process of his Doctoral research. He is a professional in Pro-E, CNC certified by CITD He is recognized as an editorial member of IJIT (International Journal for Information Technology & member in IAAC, IEEE, MISTE, IAENG, ISOC, ISQEM, and SDIWC. He published articles in various international journals on Databases, Software Engineering, Human Resource Management and Campus Recruitment & Training.

Mr. Shaik Hasanali is perusing his final semester MCA in Sanketika Vidya Parishad Engineering College, accredited with A grade by NAAC, affiliated by Andhra University and approved by AICTE. With interest in Artificial intelligence Mr. Shaik Hasan Ali has taken up his PG project on Live Cricket Scoring Website and published the paper in connect to the project under the guidance of K. Tulasi Krishna Kumar, associate professor, SVPEC

References

Book reference:

[1]. A book on cricket dummies by Julian Knight in published on www.wiley.com link https://books.google.co.in/books?hl=en&lr=&id=9l-0EAAAQBAJ&oi=fnd&pg=PA3&dq=online+live+cricket+scoring+website+book&ots=_ep63UTTQs&sig=RLn5yrHGN4xjDufufh25g-bxHwk&redir_esc=y#v=onepage&q&f=false

[2]. A book on cricket commentary and commentators by Ravi Chaturvedi in published on www.Notion Press.com link https://books.google.co.in/books?hl=en&lr=&id=epi-DwAAQBAJ&oi=fnd&pg=PT6&dq=online+live+cricket+scoring+website+book&ots=dDBJkn62Vf&sig=jLzwFdMsDh0rcnOcLYrLVAHjjAc&redir_esc=y#v=onepage&q&f=false

[3]. a book on The Great Indian Cricket Circus: Amazing Facts, Stats and Everything in Between Paperback by Abhishek Mukerji published on https://www.amazon.in/Great-Indian-Cricket-Circus-Everything/dp/9356991154/ref=sr_1_1_sspa?crid=3468LKW9LESF9&keywords=a+book+on+online+live+cricket+scoring&qid=1720676782&sprefix=a+book+on+online+live+cricket+scoring%2Caps%2C342&sr=8-1-spons&sp_csd=d2lkZ2V0TmFtZT1zcF9hdGY&psc=1

[4]. a book on Incredible Cricket: 60 True Stories Every Fan Needs to Know: A new fun-filled, illustrated children's book packed with real-life stories by Clive Gifford published on https://www.amazon.in/Incredible-Cricket-Stories-Every-Sports/dp/0008606099/ref=pd_bxgy_thbs_d_sccl_1/262-0063859-5622769?pd_rd_w=KbJ69&content-id=amzn1.sym.f406cf11-1229-4650-9e74-6c521f43ef93&pf_rd_p=f406cf11-1229-4650-9e74-6c521f43ef93&pf_rd_r=CMPHX6PDD3VMZZTNXZ6Z&pd_rd_wg=MvGLo&pd_rd_r=28ec2593-beb5-416b-8288-0ca20ac3ff37&pd_rd_i=0008606099&psc=1

[5]. book on Cricket eBook by Gurmeet Singh dang published on Gurmeet web application lab https://www.google.co.in/books/edition/Cricket_eBook/LywGEQAAQBAJ?hl=en&gbpv=1

Web references:

[6] Rameshwari A. Lokhande and Pramila M. Chowan 16 July 2018. Prediction of Live Cricket Score and Winning International Journal of Trend in Research and Development, Volume 5(4), ISSN: 2394-9333 www.ijtrd.com.

[7] Medha Wyawahare(B), Amol Dhana wade, Shreyas Dayakar, Asavari Dhole, and Mugdha Dhopade Automating Scorecard and Commentary Based on Umpire Gesture Recognition Crossref DOI link: https://doi.org/10.1007/978-3-031-23092-9_13 Published Online: 2023-01-11 Published Print: 2022 Update policy: https://doi.org/10.1007/springer_crossmark_policy
.
[8] Eeshan Mundhe, Ishan Jain, Sanskar Shah; Oct 29-30, 2021 Live Cricket Score Prediction Web Application using Machine Learning 2021 International Conference on Smart Generation Computing, Communication and Networking (SMART GENCON) | 978-1-6654-2503-2/21/$31.00 ©2021 IEEE | DOI: 10.1109/SMARTGENCON51891.2021.9645855.

[9] P.N.P. Fernando and G.N. Wikramanayake; 20 May 2014. Internet-Based Information System for ODI Cricket See discussions, stats, and author profiles for this publication at: https://www.researchgate.net/publication/216361330.

[10] Sanjay Joshi, Volume:05/Issue:04/April-2023 Impact Factor- 7.868 www.irjmets.com A SYSTEMATIC REVIEW OF MACHINE LEARNING APPLICATIONS IN CRICKET DOI: https://www.doi.org/10.56726/IRJMETS37721 eISSN: 2582-5208 International Research Journal of Modernization in Engineering Technology and Science (Peer Reviewed, Open Access, Fully Refereed International Journal).

Article References:

[11]. A titled on Winner prediction in an ongoing one day international cricket match by Agarwal, Yash published in www.content io press .com
https://content.iospress.com/articles/journal-of-sports-analytics/jsa220735

[12]. A title on cricket, community, and commerce on the internet by sanjay joshi published in www.taylorfrancies.com
https://www.taylorfrancis.com/chapters/edit/10.4324/9781315878997-12/virtually-cricket-community-commerce-internet-sanjay-joshi

[13]. A titled on Is the performance of a cricket team really unpredictable? A case study on Pakistan team using machine learning by Dr. Natarajan Gajendran published on Indian Society for Education and Environment
https://sciresol.s3.us-east-2.amazonaws.com/IJST/Articles/2020/Issue-34/IJST-2020-813.pdf

[14]A titled on Automation of Cricket Scoreboard by Recognizing Umpire Gestures by Parvathy B. Anil published in International Journal of Innovative Science and Modern Engineering (IJISME)
https://www.ijisme.org/wp-content/uploads/papers/v6i7/G1235056720.pdf

[15]. A titled on A SYSTEMATIC REVIEW OF MACHINE LEARNING APPLICATIONS IN CRICKET DOI by Sanjay Joshi, published in www.irjmets.com
https://www.doi.org/10.56726/IRJMETS37721 eISSN: 2582-5208 International Research Journal of Modernization in Engineering Technology and Science (Peer Reviewed, Open Access, Fully Refereed International Journal).

[16]. Wyawahare, M., Dhana wade, A., Dharyekar, S., Dhole, A., & Dhopade, M. (2022). Automating Scorecard and Commentary Based on Umpire Gesture Recognition. Published Online: 2023-01-11. Crossref DOI link: https://doi.org/10.1007/978-3-031-23092-9_13.

[17]. Fernando, P. N. P., & Wikramanayake, G. N. (2014). Internet-Based Information System for ODI Cricket. 20 May 2014. Available at: https://www.researchgate.net/publication/216361330.

[18]. Joshi, S. (2023). A SYSTEMATIC REVIEW OF MACHINE LEARNING APPLICATIONS IN CRICKET. International Research Journal of Modernization in Engineering Technology and Science, 05(04), April 2023. Impact Factor7.868. DOI: https://www.doi.org/10.56726/IRJMETS37721. e-ISSN: 2582-5208.

[19] Nair, V. K., Jose, R. R., Anil, P. B., Tom, M., & Lakshmi, P. L. (2020). Automation of Cricket Scoreboard by Recognizing Umpire Gestures. International Journal of Innovative Science and Modern Engineering (IJISME), 6(7), May 2020. Crossref DOI link: https://doi.org/10.35940/ijisme.G1235.056720

[20] Mundhe, E., Jain, I., & Shah, S. (2021). Live Cricket Score Prediction Web Application using Machine Learning. In 2021 International Conference on Smart Generation Computing, Communication and Networking (SMART Genco). IEEE. DOI: 10.1109/SMARTGENCON51891.2021.9645855.

[21] Fernando, P. N. P., & Wikramanayake, G. N. (2014). Internet-Based Information System for ODI Cricket. 20 May 2014. Available at: https://www.researchgate.net/publication/216361330