



e-ISSN: 2319-8753 | p-ISSN: 2347-6710

IJIRSET

International Journal of Innovative Research in
SCIENCE | ENGINEERING | TECHNOLOGY



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

Volume 11, Issue 5, May 2022

ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA

Impact Factor: 8.118

Decision Review System

Mr. Abdul Rahaman Lukman Khan, Mr. Sushant Rajesh Joshi, Mr. Samarth Sanganasappa

Thakka, Mr. Rohit Girmalla Kore, Mr. Nikhilraj Ashokrao Sawant, Mr. M.M.Kulkarni,

Diploma in Computer Engineering, Department of Computer Engineering, A. G. Patil Polytechnic Institute, Opposite to SRP Camp Vijapur Road, Solapur, Maharashtra, India

Diploma in Computer Engineering, Department of Computer Engineering, A. G. Patil Polytechnic Institute, Opposite to SRP Camp Vijapur Road, Solapur, Maharashtra, India

Diploma in Computer Engineering, Department of Computer Engineering, A. G. Patil Polytechnic Institute, Opposite to SRP Camp Vijapur Road, Solapur, Maharashtra, India

Diploma in Computer Engineering, Department of Computer Engineering, A. G. Patil Polytechnic Institute, Opposite to SRP Camp Vijapur Road, Solapur, Maharashtra, India

Diploma in Computer Engineering, Department of Computer Engineering, A. G. Patil Polytechnic Institute, Opposite to SRP Camp Vijapur Road, Solapur, Maharashtra, India

Lecturer, Department of Computer Engineering, A. G. Patil Polytechnic Institute, Opposite to SRP Camp Vijapur Road, Solapur, Maharashtra, India

ABSTRACT: The main purpose of this system is cross checking the on field umpire decision. The main elements that have been used are video replays like slow motion replay and fast forward replays Decision Review System (DRS) is a technology system, frequently used in sports (predominantly in cricket). It refers to the process to examine the decision given by the on-field umpire. The system enables to take the decision whether a batsman is out or not A run out usually occurs when the batsmen are attempting to run between the wickets, and the fielding team succeed in getting the ball to one wicket before a batsman has crossed the crease line near the wicket. The incomplete run the batsmen were attempting does not count. This DRS system used in only in cricket for checking player is out or not out on the field. However, the major objectives are: this system can be used in street cricket games; official matches so that the Audience and players can check or review their decisions using this technology. However this system helps to avoid wrong decision by umpire on the field. This system basically check the decision taken by on field player related to the out or not out. This project is developed ensure that the decision is correct or not taken by the on field umpire.

KEY WORDS: Decision Review System, DRS, Python, Android Studio

I. INTRODUCTION

This Decision Review System is created with the help of python (tkinter) and android studio, xml language, java, firebase (database). This can be implemented in gully cricket to avoid cheating after some of the modifications. So what this project does is take the input as video and then third umpire can watch the video through options available and decide whether the person is out or not out.

A. Features of the Project

- Four Modules (low catch, LBW, stump out & Run Out)
- Option to check at slower and higher rate.
- Audio of out or not out by computer.
- Instant Decision of out or not out.
- Basic android application for quick decision



B. Overall Description

The Decision Review System (DRS), formerly known as the Umpire Decision Review System (UDRS), is a technology-based system used in cricket to assist the match officials in their decision-making. On-field umpire may choose to consult with the third umpire (known as an Umpire Review), and players may request that the third umpire consider a decision of the on-field umpires (known as a Player Review).

What is DRS System?

Decision Review System or DRS is a technology based review system that was established in 2008 to assist the on-field umpire. The main idea was get to the result with utmost accuracy and transparency. The Decision Review System (DRS) is a technology-based process for assisting the match officials of their decision making.

What the DRS Can Do for Us?

The Decision Review System (DRS), formerly known as the Umpire Decision Review System (UDRS), is a technology-based system used in cricket to assist the match officials in their decision-making. On-field umpires may choose to consult with the third umpire (known as an Umpire Review), and players may request that the third umpire consider a decision of the on-field umpires (known as a Player Review).

The main elements that have been used are television replays, technology that tracks the path of the ball and predicts what it would have done, microphones to detect small sounds made as the ball hits bat or pad, and infra-red imaging to detect temperature changes as the ball hits the bat or pad. While on-field Test match umpires have been able to refer some decisions to a third umpire since November 1992, the formal DRS system to add Player Reviews was first used in a Test match in 2008, first used in a One Day International (ODI) in January 2011, and used in a Twenty20 International in October 2017.

Instant Replay or Action Replay is a video reproduction of something that recently occurred which was both shot and broadcast live. The video, having already been shown live, is replayed in order for viewers to see again and analyze what had just taken place. Some sports allow officiating calls to be overturned after the review of a play. Instant replay is most commonly used in sports, but is also used in other fields of live TV. While the first near-instant replay system was developed and used in Canada, the first instant replay was developed and deployed in the United States.

Outside of live action sports, instant replay is used to cover large pageants or processions involving major dignitaries (e.g. monarchs, religious leaders such as the Catholic Pope, revolutionary leaders with mass appeal), political debate, legal proceedings (e.g. O.J. Simpson murder case), royal weddings, red carpet events at major award ceremonies (e.g. the Oscars), grandiose opening ceremonies (e.g. 2022 Winter Olympics opening ceremony), or live feeds to acts of terrorism currently in progress. Instant replay is used because the events are too large to cover from a single camera angle, events are too fast moving to catch all the nuance on the first viewing, the high points of the event are surrounded by much of a muchness, or punditry is supplied to punch the event up, such as analyzing the daring plunge of a plunging neckline to the last revealing millimeter. In media studies, the timing and length of the replay clips as well as the selection of camera angles is a form of editorial content with a large impact on how the audience perceives the events covered. Because of the origin of television as a broadcast technology, a "channel" of coverage is traditionally a single video feed consumed in the same way by all viewers. In the age of streaming media, live current events can be accessed by the final viewer with multiple streams of the same content playing concurrently in different windows or on different devices, often with direct end-user control over rewinding to a past moment, as well as an ability to select accelerated, slow-motion or stop-action replay speed. During the COVID-19 pandemic, many jurisdictions have daily or weekly public health announcements which are available on streaming services such as YouTube in near real-time. It is no longer difficult for the end viewer to linger over the portions which present novel information, such as updated results from daily case counts or new epidemiological models, and then to speed through the dull parts at accelerated playback speed. This can be framed as a novel media consumption modality of instantaneous time shifting.

What is Python?

Python is an interpreter, object-oriented, high-level programming language with dynamic semantics. It's high-level built in data structures, combined with dynamic typing and dynamic binding, make it very attractive for Rapid Application Development, as well as for use as a scripting or glue language Python is a widely used general-purpose, high-level programming language. Python allows programming in Object-Oriented and Procedural paradigms. Python programs generally are smaller than other programming languages like Java.

What is Android Studio?

Android studio is a platform designed to create android applications and for mobile phones tablets and Android TV as well. With the help of android studio we have created a simple android application for quick review of a decision.

II. SYSTEM ANALYSIS

The main purpose of this system is cross checking the on field umpire decision. The main elements that have been used are video replays like slow motion replay and fast forward replays Decision Review System (DRS) is a technology system, frequently used in sports (predominantly in cricket). It refers to the process to examine the decision given by the on-field umpire. The system enables to take the decision whether a batsman is out or not A run out usually occurs when the batsmen are attempting to run between the wickets, and the fielding team succeed in getting the ball to one wicket before a batsman has crossed the crease line near the wicket. The incomplete run the batsmen were attempting does not count. This DRS system used in only in cricket for checking player is out or not out on the field. However, the major objectives are this system can be used in street cricket games; official matches so that the Audience and players can check or review their decisions using this technology. However this project help to avoid wrong decision by umpire on the field, this project basically check the decision taken by on field player related to the out or not out. This project is developed ensure that the decision is correct or not taken by the on field umpire.

A. Operating Systems Support

There must be used are windows-7 and above / Mac operating system and android (for application) which will support our functions that we are going to built in our system with above android lollipop version.

B. Programming Language

This project is based on GUI, so we choose PYTHON Programming along with TKINTER. Our workspace is Pycharm or visual studio. For android application we have used android studio.

C. Constraints

“Third Umpire Decision Review System” Instant replay or action replay is a video reproduction of something that recently occurred which was both shot and broadcast live. The video, having already been shown live, is replayed in order for viewers to see again and analyze what had just taken place. Some sports allow officiating calls to be overturned after the review of a play. Instant replay is most commonly used in sports, but is also used in other fields of live TV. While the first near-instant replay system was developed and used in Canada, the first instant replay was developed and deployed in the United States. Outside of live action sports, instant replay is used to cover large pageants or processions involving major dignitaries (e.g. monarchs, religious leaders such as the Catholic Pope, revolutionary leaders with mass appeal), political debate, legal proceedings (e.g. O.J. Simpson murder case), royal weddings, red carpet events at major award ceremonies (e.g. the Oscars), grandiose opening ceremonies (e.g. 2022 Winter Olympics opening ceremony), or live feeds to acts of terrorism currently in progress. Instant replay is used because the events are too large to cover from a single camera angle, events are too fast moving to catch all the nuance on the first viewing, the high points of the event are surrounded by much of a muchness, or punditry is supplied to punch the event up, such as analyzing the daring plunge of a plunging neckline to the last revealing millimeter.

In media studies, the timing and length of the replay clips as well as the selection of camera angles is a form of editorial content with a large impact on how the audience perceives the events covered. Because of the origin of television as a broadcast technology, a "channel" of coverage is traditionally a single video feed consumed in the same way by all viewers. In the age of streaming media, live current events can be accessed by the final viewer with multiple streams of the same content playing concurrently in different windows or on different devices, often with direct end-user control over rewinding to a past moment, as well as an ability to select accelerated, slow-motion or stop-action replay speed.

During the COVID-19 pandemic, many jurisdictions have daily or weekly public health announcements which are available on streaming services such as YouTube in near real- time. It is no longer difficult for the end viewer to linger over the portions which present novel information, such as updated results from daily case counts or new epidemiological models, and then to speed through the dull parts at accelerated playback speed.

This can be framed as a novel media consumption modality of instantaneous time shifting. One of the most treasured memories of growing up is playing cricket with friends. Just like me, there are countless other people whose favorite

part of the day is to grab a pair of bat and ball and just play. Gully cricket is the most popular form of sport, is played in everywhere. So, this project is going to be very helpful for those cricket fans who want to create their own decision review system.

Prerequisite: The prerequisite of this project is the basic knowledge of python. And complete knowledge of advance java and xml for designing

The third empire takes the decision about no-ball, run-out, or catches out. Here we are going to make the decision review system using python and Android Studio which will take an accurate decision about whether the batsman is out or not out.

For this system, we are using **Visual Studio Code IDE AND PYCHARM**
For mobile oriented processing, we are using **Android Studio**

III. PROPOSED METHODOLOGY

The system is created on Pycharm or Python interpreter and android studio is a tool to run and test your programs, applications / GUI based applications. We used tkinter to develop our GUI. Tkinter is Python's de-facto standard GUI (Graphical User Interface) package. It is a thin object-oriented layer on top of TCL/Tk. Tkinter is not the only GUI Programming toolkit for Python. It is however the most commonly used one. With the help of inbuilt functions and user defined functions in python the commands are given to the GUI for processing the System. We used android studio to build our basic android app to make a quick decision. Android studio is platform used to create basic and advanced level android application.

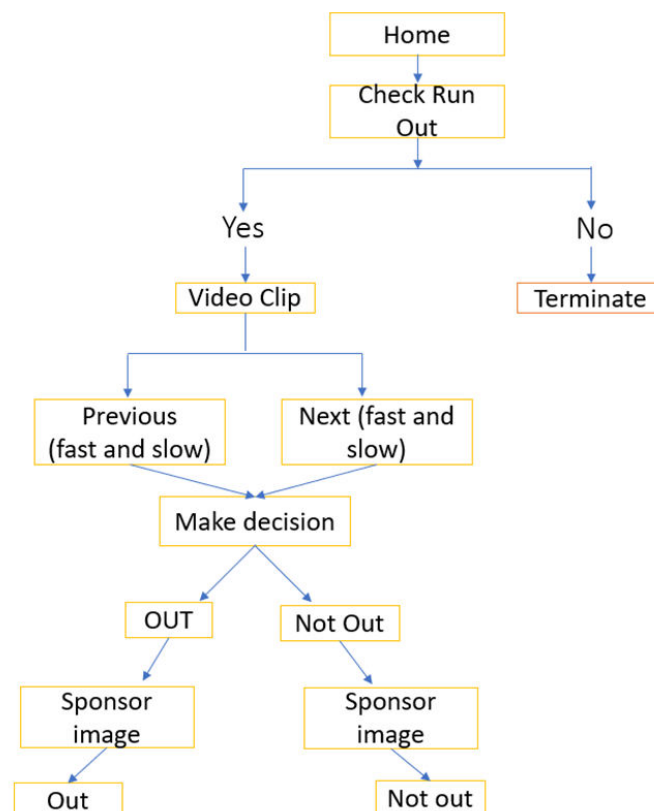


Fig.1 Architectural Diagram

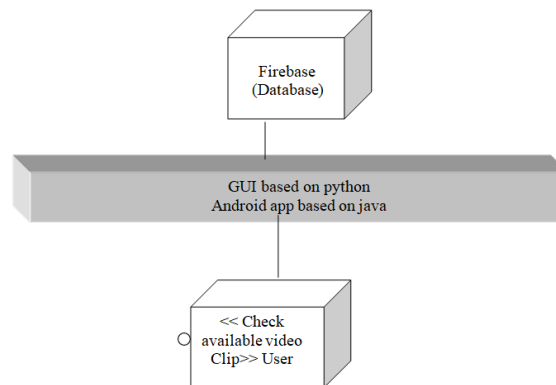


Fig.2 Deployment Diagram

IV. RESULTS AND DISCUSSION

In this section, the resulting summary of the proposed approach is summarized in clear manner and the following figure, Fig-3, in which it illustrates the home page view of the proposed approach.

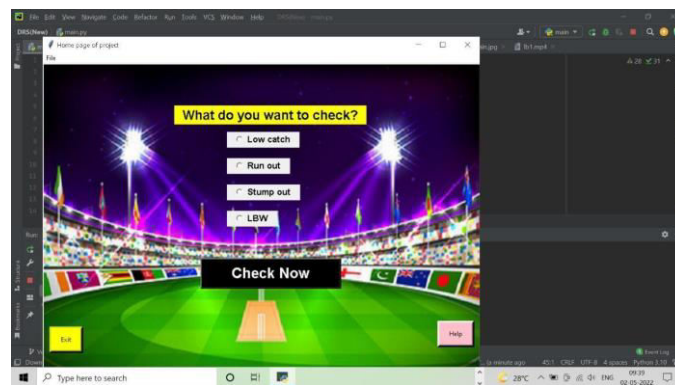


Fig.3 Homepage

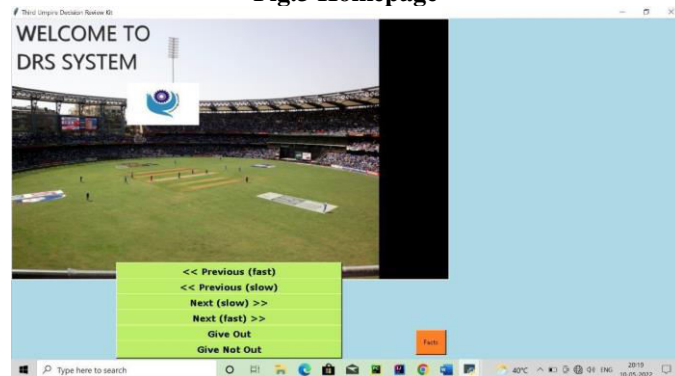


Fig.4 GUI Features

The following figure, Fig-5 illustrates the perception of final decision made by umpire or user. The following figure, Fig-6 illustrates the perception of Android Application User Interface (UI) in clear manner.

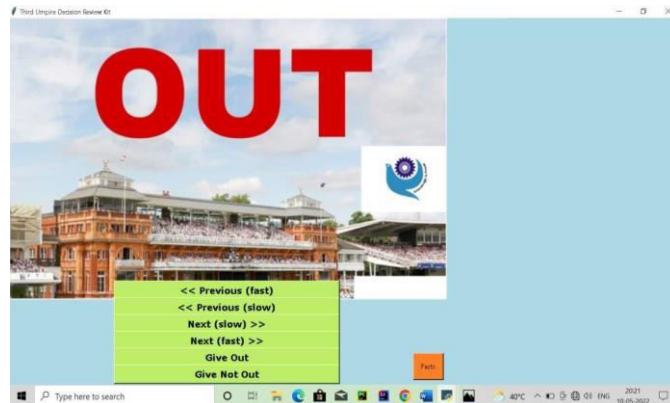
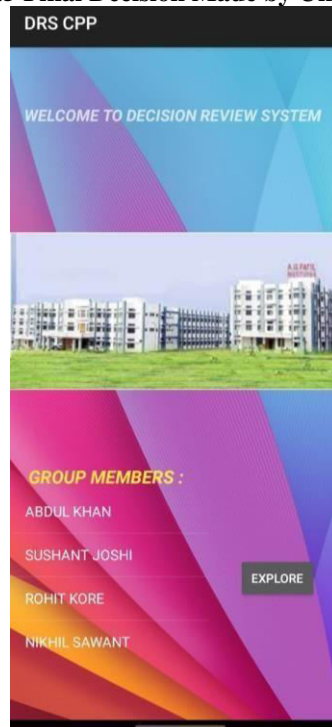
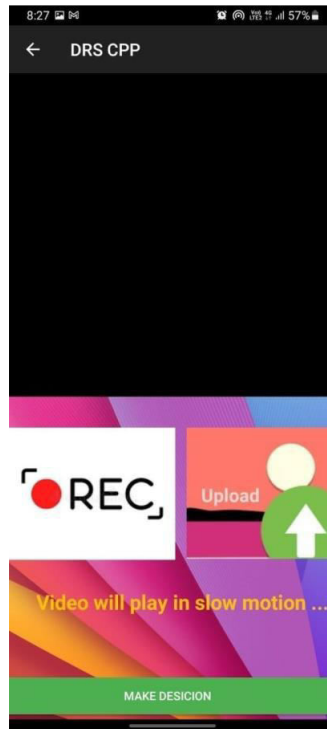


Fig.5 Final Decision Made by Umpire



(a)



(b)

Fig.6 Android Application UI

V. CONCLUSION AND FUTURE SCOPE

Given the authority to declare a batsman out after virtually examining a compiled set of complicated procedural steps in an intense environment and to do it in a matter of seconds is easy to say that it is a challenging job. Due to many variables involved in this game certain technologies are being used in such modern times with a simple aim to make these type of crucial match winning decisions as accurate as possible. Upon the arrival of decision review system the response of cricket boards around the globe has been a sort of mixed reactions with some of them gracefully accepting it to strong disapproval towards it citing the reliability of technology used. Regardless, it is now an official decree from the ICC to include the concept of DRS in every international cricket match. The result of this is that international cricketers, in addition to the traditional skills of batting, bowling, and fielding, have to learn a fourth skill—the ability to use DRS effectively. A team could end up losing the game if the chances given to review a decision are not used properly. Another way that DRS has changed the nature of the game is that it has added considerably to the cost of staging an international cricket match. As we have argued, every day of international cricket requires a large amount of expenditure on DRS related infrastructure, which when compared with the percentage of successful reversed reviews is monumental. According to ICC's calculation the correct umpiring decision rate is around 90.3 percent and the rate after the decision is corrected by a review, i.e., post review is 95.8 percent. The gain from using DRS, in terms of an improvement in the percentage of correct decisions is minuscule relative to the large sums of money required for installing DRS, arguably, similar improvement in decision making can be harvested by investing in more training of umpires. Given the technical limits towards attaining higher accuracy and the increasing presence of this technology among the spectators, DRS have no choice but to advance.

The planned DPM rule with the help of divide and conquer approach and compression technique finishes up in each run time and memory utilization, but there's faithfully area for any analysis and improvement. Enhancements are often created within the pruning procedures to ensure least range of candidate itemset is created with low execution time and with less memory footprints and a lot of significantly with high speed of execution in manufacturing pregnant result patterns.



REFERENCES

- [1] Collins, H. and Evans, R. 2008. "You Cannot Be Serious! Public understanding of technology with special reference to 'Hawk-Eye'". Public Understanding of Science, 17, 283-308.
- [2] Barooah, V.K. 2013." Upstairs and Downstairs: The Imperfections of Cricket's Decision Review System". Journal of Sports Economics 201X, Vol XX(X) 1-22.
- [3] Sportskeeda 2016, Decision Review System: Explaining the technology behind it, viewed 21 March 2020, <<https://www.sportskeeda.com/cricket/decision-review-systemexplaining-the-technology-behind-it>>.
- [4] Wikipedia, the free encyclopedia 2020, Hawk-Eye, viewed 15 March 2020, <<https://en.wikipedia.org/wiki/Hawk-Eye>>.
- [5] R. Nicole, "The Last Word on Decision Theory," J. Computer Vision, submitted for publication. (Pending publication)
- [6] C. J. Kaufman, Rocky Mountain Research Laboratories, Boulder, Colo., personal communication, 1992. (Personal communication)
- [7] D.S. Coming and O.G. Staadt, "Velocity-Aligned Discrete Oriented Polytopes for Dynamic Collision Detection," IEEE Trans. Visualization and Computer Graphics, vol. 14, no. 1, pp. 1-12, Jan/Feb 2008, doi:10.1109/TVCG.2007.70405. (IEEE Transactions)
- [8] https://www.w3schools.com/python/python_functions.aspVisual Studio
- [9] <http://docs.python.org>
- [10] www.android.com
- [11] www.timesofsports.com/cricket/what-is-drs-in-cricket/
- [12] www.sportsmatik.com/sports-corner/sports-technology/decision-review-system
- [13] www.sportsadda.com/cricket/features/what-is-drs-explained
- [14] Available Online:
www.icc-cricket.com/about/cricket/rules-and-regulations/decision-review-system
- [15] www.geeksforgeeks.org
- [16] www.github.com
- [17] www.oracle.com



INNO SPACE
SJIF Scientific Journal Impact Factor
Impact Factor: 8.118



ISSN INTERNATIONAL
STANDARD
SERIAL
NUMBER
INDIA



INTERNATIONAL JOURNAL OF INNOVATIVE RESEARCH

IN SCIENCE | ENGINEERING | TECHNOLOGY

 **9940 572 462**  **6381 907 438**  **ijirset@gmail.com**



www.ijirset.com

Scan to save the contact details