

Fifth Umpire – An Online Coaching System to Track and Monitor the Performance of the Players

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Abstract--- *The Fifth Umpire project focuses on making Indian cricket transparent. It holds a database of all the current and aspiring cricketers keeping track of their statistics. It provides a platform for the BCCI members to elect team members thus making the entire process visible for the general public thus avoiding corruption. The project also provides forums for discussion and an entertainment panel that keeps the users updated with current cricket events. There also facilitates cricket coaches in an online mode through an e-Coaching forum which makes it easier for them to interact with players, monitor their mistakes and propose corrections.*

Keywords: *e-Coaching, Cricket, Tracking and Monitoring, Selection Committee*

1. INTRODUCTION

Cricket is the most followed sport in our country. Despite being a gentleman's sport, it has often been a victim of corruption. There have been instances wherein the team selection process has been influenced by factors other than merit and cases where a lot of actors involved in cricket have been criticized/banned/suspended for their corrupt actions. For years, the government has been trying to abolish corruption in cricket and it has never been successful. The media has exposed the corruption in cricket in several occasions and yet it is left unnoticed and ungoverned.

The Fifth Umpire Project is developed to focus on abolishing the corruption in cricket. The project functions as a cricketing website, which will consist of Cricket statistics, match statistics, information about the players, coaches, Board of Cricket Control (BCCI) members, etc. The most important feature about the Fifth Umpire project is how it brings transparency to the selection process of cricketers.

Firstly, the BCCI members will create an individual account for themselves using the website. The coaches will also make an individual account and join cricket coaching centers. A person can register him/herself as a player through the website and can join a coaching center where they are trained by coaches. The coaches then calculate the average runs scored (for a batsman), the average wickets taken (for a bowler), the mistakes made and the number of corrections done by the player and update the details through the website. The coaches can also interact with the players and provide tips and training through the e-Coaching forum. The ranking system of the website then ranks the players in a rank list based on their average and the number of mistakes and corrections made. This rank list is then sent to the BCCI members. Once all the BCCI members have

logged in to the website, they will start the polling to select the team. The BCCI members take a look at the rank list, and with the help of it, decide on the players to be selected for the national team. The entire polling process will take place on the website based on the rank list given by the coaches, so selection based on any other parameters other than merit is eliminated. Once the BCCI members have finally decided on the team, the team is displayed on the website for the general users of the website to see. The general users of the website can discuss about the selected team using a Discussion Forum, in which they can list out their ideas on the team and give out their thoughts. They can also use the forum to talk about any matter related to cricket.

The Fifth Umpire website also consists of Player statistics and match information which the general users of the website can access. They can read articles and blogs of different matches written by cricketing experts.

2. EXISTING SYSTEM

i) The Board of Control for Cricket in India (BCCI) is the national governing body for cricket in India. The board was formed in December 1928 as a society, registered under the Tamil Nadu Societies Registration Act. It is a consortium of state cricket associations and the state associations select their representatives who in turn elect the BCCI officials. [6]

ii) There is a panel provided for anti-racism in the existing website. The ICC is the international federation responsible for the global governance of the sport of cricket and the Anti-Racism Code for Players and Player Support Personnel (the 'Anti-Racism Code') is adopted and implemented as part of the ICC's continuing efforts to maintain the public image, popularity and integrity of cricket by providing: (a) an effective means to deter any participant from conducting themselves in a manner that may be construed as racially and/or religiously offensive; and (b) a robust disciplinary procedure pursuant to which all matters of improper conduct of this nature can be dealt with fairly, with certainty and in an expeditious manner.[4]

iii) The Board of Control for Cricket in India (the "BCCI") has adopted these anti-doping rules (the "Rules") to impose clear prohibitions and controls as part of the BCCI's continuing effort to: (a) maintain the integrity of the sport of cricket in India; (b) to protect the rights and health of all participants in the sport of cricket in India; and (c) to keep Indian cricket free from doping. [3]

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3. DRAWBACKS OF THE EXISTING SYSTEM

- Existing BCCI website does not provide BCCI members the means to select teams through the site. The selection process is discreet and not transparent. [6]
- The existing website does not give details about all the BCCI members. [2]
- The existing system provides no means to view the ranking of players dynamically, along with their statistics. [5]
- Coaching Centers are not monitored and are not legalized by the BCCI in the existing system. [6]
- The general public cannot view the election process dynamically. [6]
- The existing BCCI website has a panel for anti-corruption which only provide the penalties for corruption but no means to prevent them. [1]
- There are panels provided for anti-doping and anti-racism which only provide the penalties for doping and racism respectively but no means to prevent them. [3], [4]

4. PROPOSED SYSTEM

The Fifth Umpire Project is developed to focus on abolishing the corruption in cricket. The project functions as a cricketing website, which will consist of Cricket statistics, match statistics, information about the players, coaches, Board of Cricket Control (BCCI) members, etc. The most important feature about the Fifth Umpire project is how it brings transparency to the selection process of cricketers. BCCI Members can select the teams through the website by logging into their accounts. The complete details of all the BCCI members are provided in the website. The proposed system will rank the players based on their statistics and this can be viewed by the general public.

Coaching Centers can be set up only through the website and their details are available for the public to view and rate. They are monitored by the BCCI. The general public can view the election process dynamically through the polling forum provided by the website. The coaches can interact with the players and provide them with support through the e-Coaching forum of the proposed system.

5. STRUCTURE OF THE PROPOSED SYSTEM

The Fifth Umpire website is to be used exquisitely by the general public as the main objective of the project is to make the entire cricket system transparent. It is to be used by the BCCI members, coaches & players. The Fifth Umpire System has to interact with the database, BCCI database, coaching center database, and the internet.

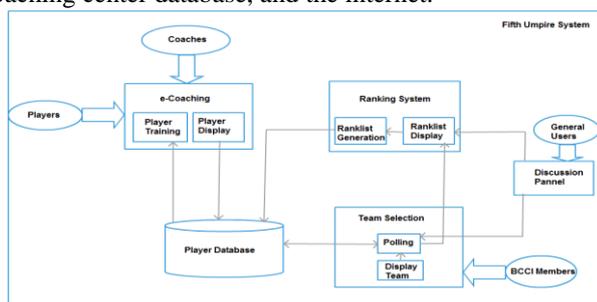


Figure 1. Structure of the Fifth Umpire System

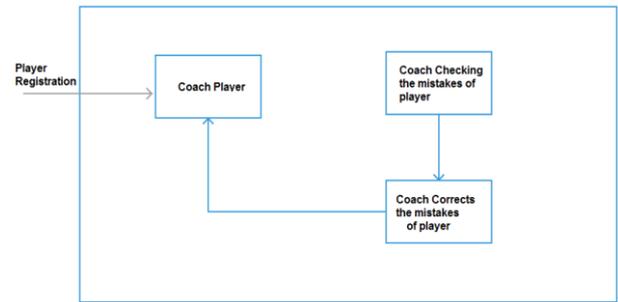


Figure 2. e-Coaching module

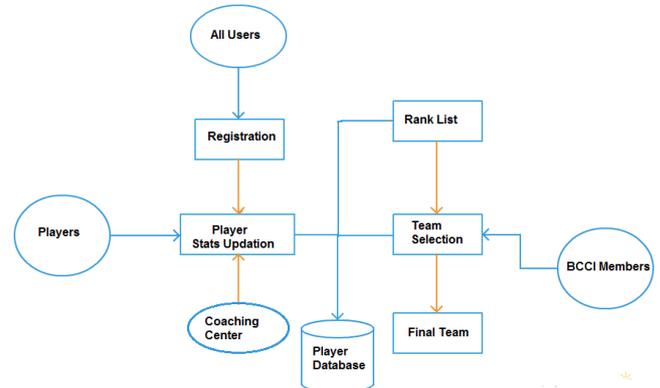


Figure 3. Team selection

6. METHODOLOGY

Figure 1 shows the structure of the Fifth Umpire System. Figure 2 and 3 shows the details of the modules namely Team Selection and e-Coaching. The other different modules and its working are explained in this section as follows.

Login for different types of users

The system provides different login panels for the 3 different types of users, namely, coaching centers, players & BCCI members.

Register Coaching Center

The FU project provides a webpage wherein owners/coaches of a coaching center can register their coaching center in the website thereby making it official. The system allows them to upload pictures of their coaching centers, infrastructure details, fee structure, details of coaches and contact details.

Register Player:

A user can enrol himself as a player through the Register page which provides an option for registering as a player. One must fill in the necessary details such as name, username, password and the ID of the coaching center they are willing to join.

Enrol in a Coaching Center

Aspiring cricketers who wish to enrol themselves in a coaching centre can do so through this website. The website provides a page wherein the general users/ aspiring players



can view all the available coaching centres around them & their details by choosing their location (state & city) from dropdown lists. On clicking on the name of a coaching center, the user should be able to view full details and enrol in the center.

Rate Coaching Centers

In the view coaching centers page of the website, the users (general public) should be able to rate & review the coaching centers. This is done by clicking on the no of stars ranging from 1 to 5 to rate, and use a text box to submit their review.

Update Player Statistics:

The system provides the means for the coaching centers to update the player statistics. The coaches should be able to login to their profile (that of the coaching center) and view all the players enrolled to them. The coaches can click on a player's name and update their details such as no of matches played, runs scored, wickets taken, mistakes and corrections made.

Update Rank-List Automatically:

As and when the coaches submit the statistical updates of their players, the system automatically ranks the players based on their average, matches played, mistakes and corrections made coaching-center-wise, district-wise, state-wise and nation-wise and displays these details on the "View Players" page.

View details:

The general users should be able to view the details of all the BCCI members, Players, Coaches and Coaching Centers. This can be done by clicking on one of the following panels on the home page: View BCCI members/ View Players/ View Coaching Centers.

Conduct Open Team Selections:

The system provides means to conduct transparent team selections. The president can click on a start selection button that shows a list of all top players that is visible to all. The board committee can click on a player's name to vote for him/her. The president can close selection by clicking on a button.

Start discussions:

The NCMS provides a discussion forum for the general public to start a discussion, post comments, up vote & down vote comments.

e-Coaching:

The Fifth Umpire system provides the unique facility of e-Coaching wherein coaches monitor the players' mistakes, provide tips and update their database with the mistakes and rectifications made which is shown in Figure 2.

Provide Live Newsfeed:

The system takes live cricket updates from the internet and displays them on the home screen.

7. RESULTS AND DISCUSSIONS

ID	name	cid	avg	matches	selected	mistakes	rectification
56c3e74-116f-40cc-8b10-27849a007c5	Alho Markel	2428646e-f56e-4d3d-96e2-9a68579262e5	89.9	258	0	120	110
81a86200-ca1b-469a-a9d6-97c3675c2386	Don Bradman	2428646e-f56e-4d3d-96e2-9a68579262e5	99.91	263	1	1	1
509c886-2a23-40af-837e-8096a6a58a22	Harbhajan Singh	e09c11e3-1976-4c47-9a47-463c559f9d4d	78.9	235	0	125	85
2f996d3-8cd7-410f-8780-3394389f4a4a	Irfan Pathan	e09c11e3-1976-4c47-9a47-463c559f9d4d	72.5	109	0	92	60
7a990165-82a9-4845-8a69-54d15199813c	Malanga	e09c11e3-1976-4c47-9a47-463c559f9d4d	80.5	186	0	89	82
6673EAA-2393-44C5-95C9-412E83690DC6	MS Dhoni	9089f338-e067-48b5-a46c-67750f4fd72e	82.5	153	0	128	125
f1584557-0110-4b48-a174-1a8451f93070	R. Bhatia	9089f338-e067-48b5-a46c-67750f4fd72e	68.2	168	0	213	170
986a1f7e-e043-495c-97cc-049e108a228d	Rahul Dravid	e09c11e3-1976-4c47-9a47-463c559f9d4d	90.5	325	0	52	42
52ace794-00a9-4c9c-9aad-2aa52541852	Ravichandran Ashwin	9089f338-e067-48b5-a46c-67750f4fd72e	80.9	152	0	120	89
013e0241-4650-4745-9441-344c4f15fcd3	Ravindra Jadeja	286a7630-b69d-4a6f-9945-2ec0e5f0c9	63.5	116	0	87	76
1546028f-5092-4c2e-bede-1e1d84b46b3	Ricky Ponting	286a7630-b69d-4a6f-9945-2ec0e5f0c9	80.6	25	0	98	92
47d904da-2344-4864-a48f-ca39b54e31ca	Saures Ganguly	e09c11e3-1976-4c47-9a47-463c559f9d4d	83.9	336	0	156	138
32323706-0e37-487a-b687-78946d7268a	Stuart Binny	286a7630-b69d-4a6f-9945-2ec0e5f0c9	69	69	0	88	69
74be7232-8c07-4d8e-87ab-80073970c855	Suresh Raina	286a7630-b69d-4a6f-9945-2ec0e5f0c9	68.9	167	0	113	98
7559B374-0408-4A90-9A9D-DAFCE7F952	Virat Kohli	9089f338-e067-48b5-a46c-67750f4fd72e	83.9	129	0	153	103

Figure 5. Sample Rank List - Rank List module

name	avg	matches	mistakes	rectification
Rahul Dravid	90.5	325	52	42
Alho Markel	89.9	258	120	110
Saures Ganguly	83.9	336	156	138
Virat Kohli	83.9	129	153	103
MS Dhoni	82.5	153	128	125
Ravichandran Ashwin	80.9	152	120	89
Ricky Ponting	80.6	25	98	92
Malanga	80.5	186	89	82
Harbhajan Singh	78.9	235	125	85
Irfan Pathan	72.5	109	92	60
Stuart Binny	69	69	88	69
Suresh Raina	68.9	167	113	98
R. Bhatia	68.2	168	213	170
Ravindra Jadeja	63.5	116	87	76

POLLING

- Don Bradman
- Rahul Dravid
- Alho Markel
- Saures Ganguly
- Virat Kohli
- MS Dhoni
- Ravichandran Ashwin
- Ricky Ponting

Figure 6. Sample polling from the Polling module

Figure 5 shows the entire set of players in the team, the matches they have participated and the mistakes they have committed. Figure 6 shows the sample polling done by interested viewers.

ID	name	avg	matches	mistakes	rectification
81a86200-ca1b-469a-a9d6-97c3675c2386	Don Bradman	99.91	263	1	1
986a1f7e-e043-495c-97cc-049e108a228d	Rahul Dravid	90.5	325	52	42
56c3e74-116f-40cc-8b10-27849a007c5	Alho Markel	89.9	258	120	110
7559B374-0408-4A90-9A9D-DAFCE7F952	Virat Kohli	83.9	129	153	103
6673EAA-2393-44C5-95C9-412E83690DC6	MS Dhoni	82.5	153	128	125
52ace794-00a9-4c9c-9aad-2aa52541852	Ravichandran Ashwin	80.9	152	120	89
1546028f-5092-4c2e-bede-1e1d84b46b3	Ricky Ponting	80.6	25	98	92
7a990165-82a9-4845-8a69-54d15199813c	Malanga	80.5	186	89	82
509c886-2a23-40af-837e-8096a6a58a22	Harbhajan Singh	78.9	235	125	85
2f996d3-8cd7-410f-8780-3394389f4a4a	Irfan Pathan	72.5	109	92	60

Figure 7. View the selected team - View Team module

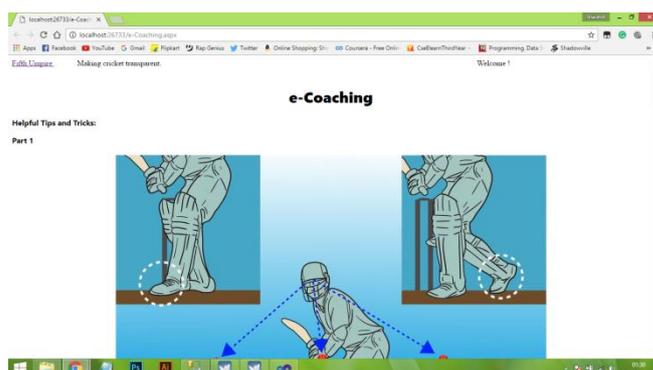


Figure 8. View Tips and Tricks: e-Coaching module

Figure 7 shows the selected teams which are based on the polling data. The player selected through polling based on his performance was the one ranked as first in the selected list. Figure 8 shows the module which helps the player with the tips and tricks for playing which is achieved through the system that is developed rather than in the original field.

Thus this fifth umpire system:

1. Promises to abolish corruption in selection process of cricket by making the polling process transparent to the users of the website.
2. Coaching Centers are legalized and monitored.
3. User opinions are taken into consideration unlike in the existing system.
4. Complete details of all BCCI members, coaching centers, coaches and players are provided which are not available clearly in the existing system [3].
5. The ranking system ranks the players based on their statistics which can be viewed by the general public. This facility is not available in the existing system [4].
6. Fifth Umpire provides a unique e-Coaching facility, where players can be trained online by coaches who review their mistakes and update the respective rectifications.

FUTURE WORK

The future is to develop a virtual reality based cricket coaching system. This system will help the player understand during the practice sessions itself, the force and the direction to be given while facing the ball.

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