

Automated Commentaries for Simulated Soccer

Instant Replay Widget

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1. Instant Replay Introduction

As an extension to our project we decided to implement some form of widget that would show some of the goals as a 2D graphic on-screen. This widget would be displayed to the audience at half time accompanied by some statistical analysis of the current game in play as voice output.

The widget consists of a small JFrame with a nested JPanel displaying each goal as a 2D line extending from where the shot was taken to the ending position in the goal. Each line is displayed along with distance travelled and the player who scored the goal. All lines are drawn on a jpeg of a pitch to represent the exact positions on the playing field. The JFrame also enables the user to step through each goal scored by clicking a button.

1.1. InstantReplay.java

The class is rather straightforward. It starts off by loading the JPEG of the pitch which it does by extending the PitchPanel superclass which holds all the procedures for loading and nesting a jpeg within a JFrame.

The object remains live but hidden throughout the game until the system decides to display it at half-time where the user will be able to toggle through each goal using the button. This button increments an index which is stored locally. When that button is pressed, it triggers an increase in the index by 1 and calls the redraw method which in turn calls the overridden paintComponent method within the InstantReplay class. This does the relevant repainting of the screen excluding the redrawing of the pitch which is done by the PitchPanel superclass, and the adding of the line referenced by the local index variable.

Each line is represented by the object GoalGraphics which enables all information about that line to be stored enabling a tidy data structure when added to the arraylist. The description of this object can be found in 1.2 below.

1.2. GoalGraphics.java

Goals for this particular purpose are represented by 4 coordinates: Starting X, Starting Y, Ending X, Ending Y along with player number who scored the goal and the distance travelled. Each getter enables the InstantReplay class to retrieve all the relevant information to construct the graphic to be drawn on screen when the object is retrieved from the ArrayList.