Game/experience and controller proposal for COMP140

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February 2020

1 Game/experience

The game I will create will be a 3D sports interactive game where the player uses a badminton racket to whack a shuttlecock to an AI controlled player. The aim of the game is to play like you're playing a real game of badminton, and try to reach the winning score before the AI.

For the electronic components and physical form factors for the controller, I will be using sensors that can measure and maintain the orientation and angular velocity of the racket and also the speed at which the racket has been swung.

The controller itself, will be a badminton racket with some built on electronic components that will read the inputs of the player, such as when the racket is being swung, if the shuttlecock will be hit by the racket, etc. The arduino board will be attached to the bottom of the hilt so it does not become an inconvenience when holding the controller.

The electronic components that will be used for the controller will be an accelerometer and gyroscope to measure the orientation and velocity of the racket. I will also be using the arduino uno board for the processing of the data from the sensors and to process the inputs from the data taken from the sensors.

The player should be moving their arm a lot in order to swing the racket, this could benefit the user by making them more fit if they played either the real thing or this game. It could also help with hand-eye coordination as it requires the user to look at the screen and time the swing with the game to hit the shuttlecock.