

Virtual Softball

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Abstract

In this virtual softball game, players use physical equipment, such as bats and gloves, with their movements reflected on the screen to play softball. The game starts with a ball approaching the batter on the display while the bat movements are tracked using an FPGA. The batter must time the swing to hit the ball at a desired angle, which is sensed by a built-in accelerometer on the bat. On another screen, the catcher sees the approaching ball and prepares to catch it by moving the glove to the right position and timing the closure of the glove. The placement and timing of the ball will be determined by how the batter hit the ball (based on timing and bat placement). Points are scored for the batter when they hit the ball out of the park or if the catcher fails to catch the ball. The catcher earns points for successfully catching the ball or if the batter strikes out. Given more time, we may add another player, the pitcher, who initiates the ball throw for the batter to hit. The pitcher's hand movement would determine the ball's location and speed as it approaches the batter's strike zone.