Checkers is a two player game—but you can't always find an opponent. There are programs that allow you to play against a computer, but it lacks the feel of really playing the game.

Our project will allow a human player to move physical checkers pieces on a board, and play against a computer's projected pieces. We'll use a camera to track the movement of the pieces after the player has completed their turn. We will interface between the FPGA and a computer to send the board configuration to the computer, which will run the AI to determine its next move. The signal will be transmitted back to the FPGA which will project the computer's move onto the board. This will require a bit of projector and camera set up. Further additions may be other common features of virtual checkers programs such as a turn timer, undo move feature, or suggested move feature.