

ChessAI – Real Life Chess against AI

Final Project partner: Grayson King

My grandfather loves to play chess but nowadays he has less and less people to play with. And since he doesn't own and doesn't know how to use a computer, he cannot play it online. I decided to build a physical chess board that can keep track on the positions of the figures (either by a camera or by buttons underneath the chess board) and display moves that the opponent would take by turning on and off LEDs on the board. In this way, my grandfather gets to play real chess against a computer without ever turning one on! The chess game would be modeled as an FSM where the states are the positions of the chess figures. On every turn, the move from the player would be sent to a Raspberry Pi running a Python script that acts as the opponent and returns the corresponding move the AI would play. Possible extensions to the project are displaying the game on a screen, mechanical movements of the figures, two players version etc.