

# Checkers AI to Crush Human Players: An Elegant Solution

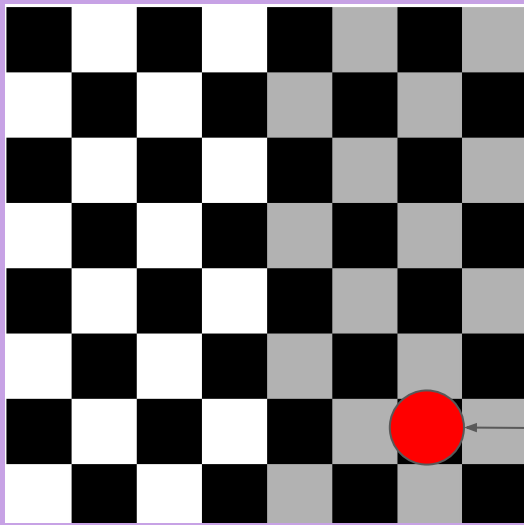
By: Hansen Liman & Matthew Harrison

## Data Representation:

Coordinates are given  $i, j$  values indicating row and column and will provide game-state information for our program. 2-D lists will be used to indicate the board layout and integers in each element will indicate whether a black, red, or no piece is on a given tile.

## UI:

We will use a streamlined UI that prints the current state of the board after each move we make and clear out the previous output in the system shell to keep the program output readable. The user will be prompted to take a move by providing coordinates per move (each captured enemy piece will prompt another coordinate to be input for deciding next move in turn.)



$i=6; j=6; (6,6)$

## Requirements:

A clean and highly usable program capable of quickly and effectively determine optimal moves in a game of checkers to defeat a human player. To aid in making good choices, a minimax approach to searching the optimal move.