When the search depth is increased, the min max algorithm can traverses the tree to evaluate the possible results of a move that are more steps away from the current step to generate a optimal decision for the AI. Thus, a more optimal decision of the AI will more likely be generated with increased search depth.

However, we need consider the available time given to make decision to move the pieces, because this is a mind-challenging game will usually have a time limit for each turn just like chess game. Although the increase in search depth give better search result, but when the time limit is reached, it should not traverse further but to return any results that it has found.

By improving the evaluation function, we will have a better heuristic to evaluate different moves. Then the agent will be able to make a more rational decision with improved heuristic and takes fewer steps to reach the goal state. Due to the fact that time limit is one of the factors, we need to evaluate any states to return a more optimal solution for the AI to make decision. Therefore, improved evaluation function could help the AI to play more optimally within a time limit.