Chess

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Problem Statement

- Goal 1: To build an elegant front end.

- Goal 2: Construct an AI Chess Engine for single player version of the game.

- Goal 3: Improve the depth and efficiency of the Chess Engine and minimise the time consumed for move analysis.

- Goal 4: To top the AI Engine performance.

CHALLENGES

- Adding human touch to the Chess Engine and implementing different strategies in the game according to the stages in the game.

- Adding special Chess moves Eg: Enpassent, Castling, Pawn Promotion.

- Switching preferences between positional and material advantages in the game depending on the number of moves played in the game. i.e: According to different junctures of the game.

TROUBLESHOOTING

- We used the Minimax-Algorithm for predicting moves. For optimisation, we've used Alpha-Beta Pruning along with a customised move ordering algorithm.

- The evaluation function accounts for both positional and material advantages, and assigns values to different game states based on the principles of Chess.

- The difficulty is based on the maximum time allotted to the computer to look for an optimal solution. More time is allotted for higher levels of difficulty.

FUTURE WORK

- The Chess Engine can be extended as a professional one that can be used for active game analysis by Chess players.

- An online extension of the two-player version .

- Use more advanced game analysis algorithms and use machine learning to calculate parameters for the game analysis algorithm automatically.

A bunch of screenshots !

And some more..

Stalemate!
Draw.

Back to Main Menu

Exit

Checkmate!
Player I Wins!

Back to Main Menu

Exit