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"CHESS ENGINE" - Guide to Your Game

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ABSTRACT

Chess has come a long way since it was first played by two opponents, each with one color of white and black pieces. Chess is an old strategy board game for two players. There are a staggering number of options, with 69,352,859,712,417 possible games after 5 moves each. As a result, predicting every single move is nearly difficult. Engines, like skilled chess players, aim to dig deep into the situation. The further ahead they can see, the better the move they can make today, as they can assess situations that will emerge as a result of the best potential moves in the future. Engines try to utilize "pruning" to focus on the most promising lines while ignoring the ones that are blatantly bad.

Key-Words: -Pieces, Engine, Pruning

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Introduction

A chess engine is a piece of software that plays and analyzes the game of chess. The term "engine" simply refers to a high-powered program, comparable to a search engine, that performs a lot of searching and processing.
A chess engine is a computer software that analyzes chess or chess-like positions and creates the strongest move or set of moves. The back end of a chess engine is usually a command-line interface with no graphics or windowing. Engines are typically used in conjunction with a front end, which is a windowed graphical user interface like Chessbase or WinBoard that the user interacts with via a keyboard, mouse, or touchscreen. The user can use this to play, learn, and visualize the game of chess.

Problem Formulation

We have taken this project because of the following reasons:

1. The Existing system does not have a room for improvement.
2. It doesn't focus on beginners thought process.

Literature Review

Chess has come a long way since making its appearance on a computer and every year there is a new chess engine created that works better than the previously existing ones. But all these engines have one thing in common, they all work on some variant of the Min-Max algorithm. The game tree is made shorter and more efficient and ways to play around with the graphical user interface are invented. The search tree is then pruned to save the time that the machine needs to compute the next best move. Thanks to all this, chess engines have come a long way and are now known all around the world to defeat some of the best Grandmasters of the world with their own strategies. But the AI in chess still has a long way to go before it can be declared as the fastest and the best chess playing Collapse.

Methodology

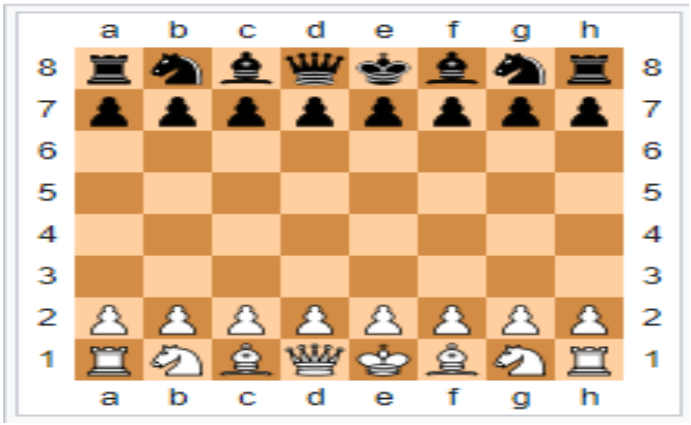
A chess engine is a program that analyzes chess or chess variant positions.

Providing idea of different checkmate rules and to Make you understand chess more efficiently and It will provide a platform to play, learn and improve your game.

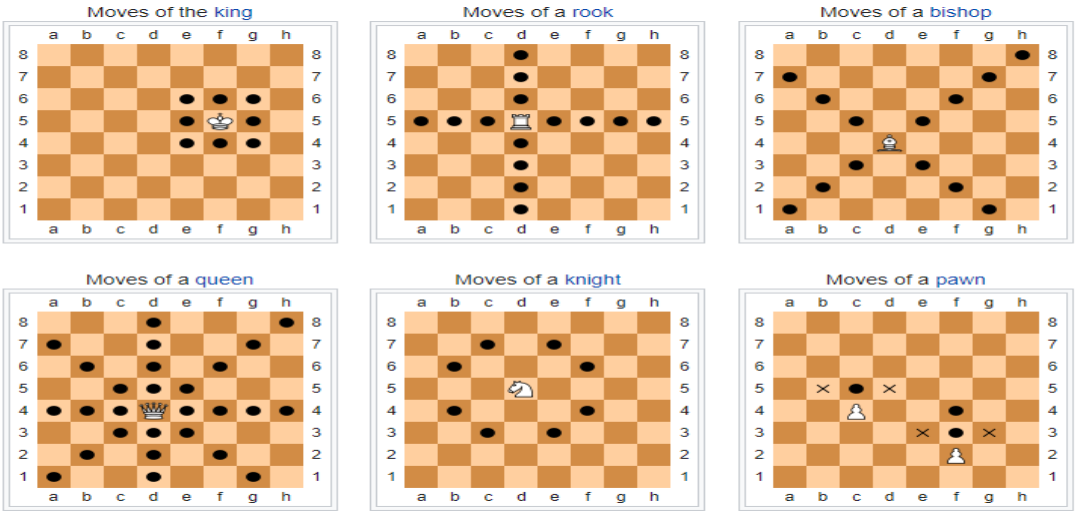
And to achieve this we have :

- **Setup:** Which square does the queen go on? Find out as we get ready to play by placing your pieces.
- **Basic rules**: Learn how each chess piece moves and captures.
- **Check and checkmate:** Surround your opponent's king to win.
- **Advanced rules:** Promotion, en passant and castling.

Game Setup:



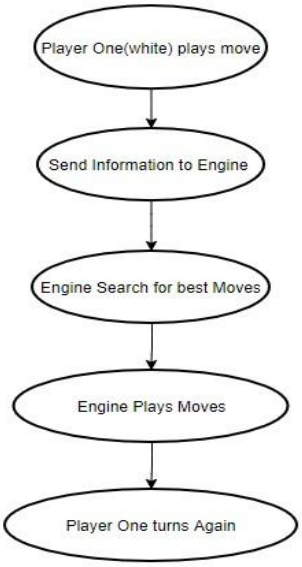
Legal Moves:



System Features –

- Analysis of Chess Game.
- Learning and Improving Chess.
- Better understanding of Game positions and different moves.

.**Process Flow :**



Result Discussions

The aims of the project are as follows:

- A Simple and efficient way to know about chess.
- Analysis of chess games in best way possible
- Available for different platform
- Evaluating kings placement on the board .
- Updates everyone with the different list of moves.
- To bring a Chess Player one Platform to learn.
- A chess engine is a program that analyzes chess or chess variant positions.
- Providing idea of different checkmate ideas.

Conclusion

In Conclusion we can say that yes we are aware that our Chess engine has room for improvement, and is extremely far from the best computer engines. But as we said it is simple and user friendly for beginners because it tends to provide you with new moves and providing idea of different checkmate rulestoMake you understand chess more efficiently, it will also provide a platform to play, learn and improve your gaming skill.

Acknowledgment

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