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Project Title: Integration of Heuristic Techniques with Computer Go Game

Description:

Go is a board game that originated in ancient China over 2,500 years ago. It is also known as Weiqi in Chinese, Baduk in Korean, and Igo in Japanese. Go is played by two players, who take turns placing black and white stones on a 19x19 grid board. The objective of the game is to control more territory than your opponent by placing stones on the board. Stones can be captured by surrounding them on all sides with your opponent's stones, which removes them from the board. The game has simple rules but complex strategic possibilities, making it a fascinating and challenging game to play.

Installation:

There is no installation required as this is a game played on the browser.

How to Play:

1. The objective of the game is for players to use the stones to form territories by occupying the vacant areas on the board.

2. At the beginning of the game, players should consider placing the stones near handicap markers, usually located in the corners of the board. This way, the player is at an advantage of gaining corner positions that help gain territory and are easy to defend.

3. Players should only play stones at the edge of the board as they are as easy to capture. Typically, the corner only needs two stones captured while side requires three stones. The open area, however, requires players to seize for stones.

4. If looking to occupy an open area, consider building off a stable structure. You get to protect your stones and create a broader base for subsequent moves.

5. Avoid placing your stones close to your opponent's. You don't want to allow them to gain more considerable influence when you are chasing stones.
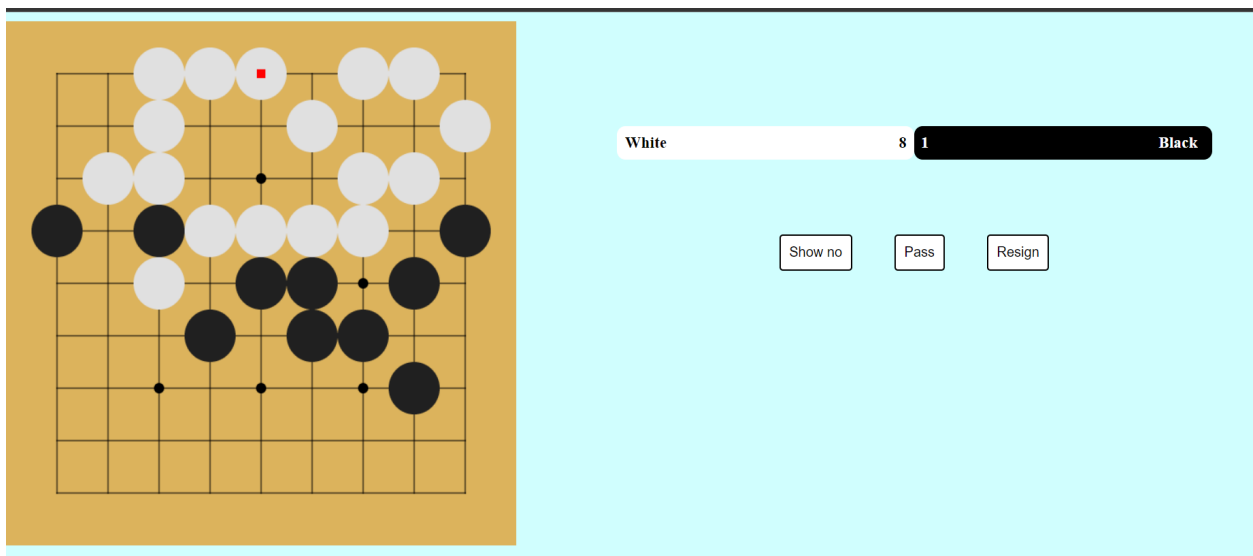
6. Avoid placing your stones on your opponent's territory. You are only providing them with free stones for capture. This strategy works when you are confident of capturing his stones.
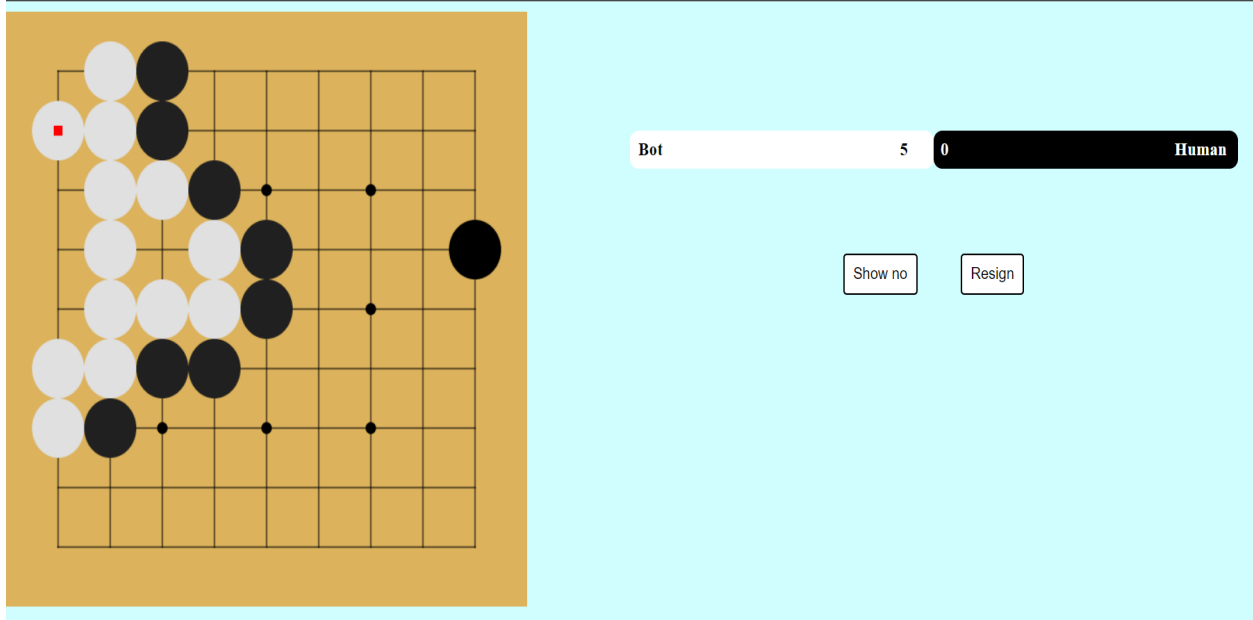
Screenshots:

Game Menu:
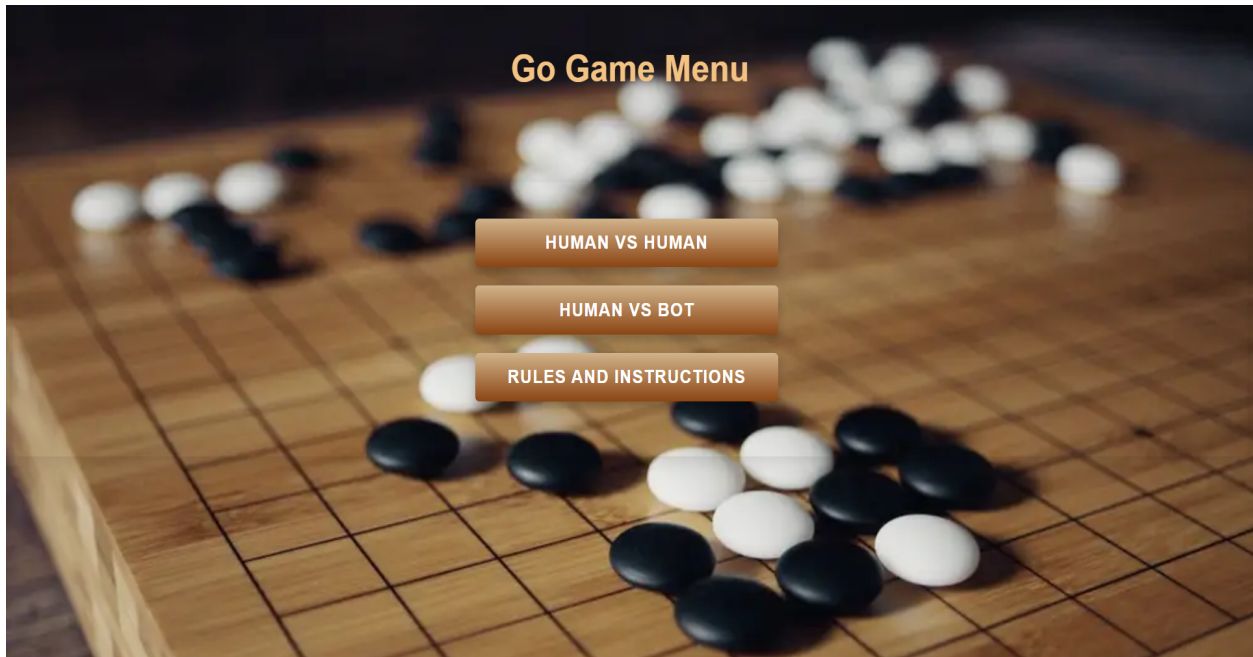
Human vs Human:

Human vs Bot:

Future Development:

- The future scope of this project includes the use of advanced Go techniques and strategies like tenuki (which is the art of playing at a distance for a greater purpose).

- The scope also includes the addition of various levels of difficulty for the bot according to the user's requirement.

- In addition, we would like to make the bot more intelligent by using Reinforcement Learning Algorithms and Neural Networks.

- Furthermore, the future scope includes adding more features to the User Interface as well as beautifying the current UI.