

Hexagonal Chess Windows Application

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Project Description:

Hexagonal chess is a variant of chess played on a board with hexagonal tiles. The project will be to create a windows program to play Glinski's version of hexagonal chess. This program will have the following features:

- user friendly UI including displaying valid moves and a rules encyclopedia
- pretty additions to user interface including music and a settings menu
- loading and saving of games
- pass and play multiplayer
- single player play with AI trained with reinforcement learning which should be able to beat a new player while taking less than a second per move
- turn timers

If time permits, the program can be extended with the following features:

- full multiplayer play with chat functionality
- linux port
- difficulty options for single player play
- improved AI that can beat experienced players with same time constraint

Preferred Skills:

- C++
- TensorFlow or LibTorch
- some graphics library with Win32 Api preferred

Preferred team size: 3-4

Location: remote or on campus

Intellectual Property: open source (MIT license)