

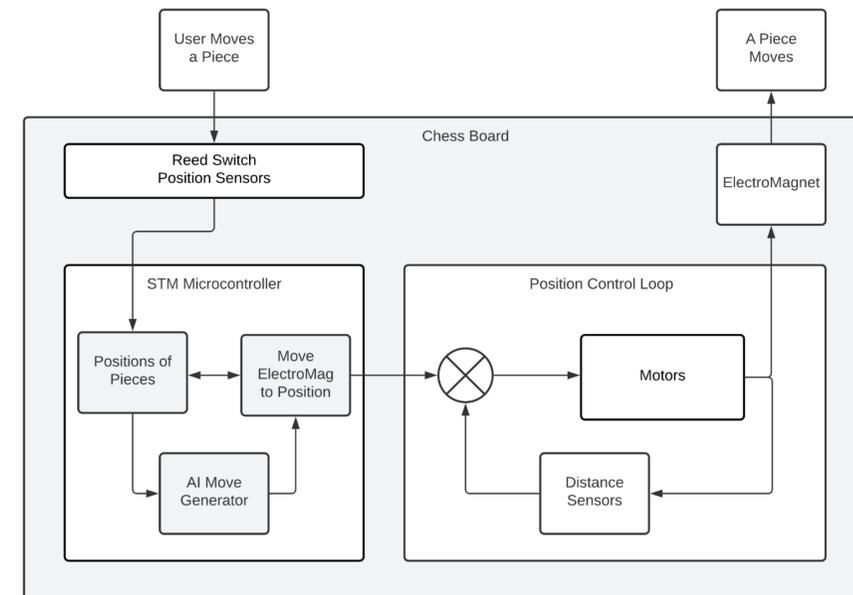
Grand Master's Challenge

Project

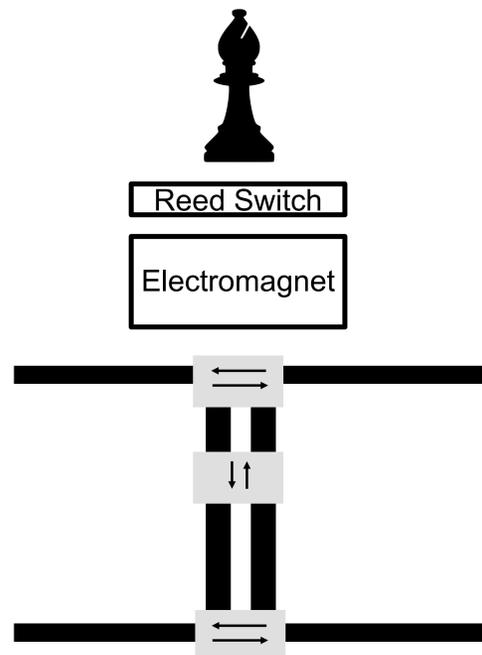
Playing chess is mentally stimulating and fun, but there aren't always good ways to play on your own.

- Playing chess online can make the board not look as real as an actual board.
- Play physical chess without another person present.
- Move each of the pieces to the appropriate location on the board using a motorized placer.
- Keep track of where everything is so the player only gives input and the board does the rest.
- Give people the opportunity to keep up on their chess skills whenever they have time.

System



Methods



Moving a piece:

- Two motors control the X and Y position of the carriage.
- An electromagnet activates to grab the chess piece.
- The motors move the chess piece between other chess pieces to the appropriate location.
- The electromagnet is deactivated.

Accuracy:

- Two ultrasonic distance sensors determine the position of the chess piece within 0.3 in.

Conclusion



Results:

- Simple interactive chess board that brings the computer out of the computer.
- Out of the box chess game, ready to play.
- Play chess in the comfort of home at time .
- Expose consumer to the magic of chess and engineering.

Future revisions:

- Built in game clock
- Playability over the internet
- RFID chips implementation