WIZARD CHESS
ITSP ABSTARCT 2015

Members: -

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Preferable slot:- Slot 2

Timeline:-

Week 1:
2 of us will start coding the AI part and the other 2 will start the mechanical part of the project. Those who are coding will study about different algorithms that are potentially applicable and start implementing them. The other 2 will start building SolidWorks model. After successful simulation they'll start acquiring the required components.

Week 2:
The coding part will be finished by this week. The other two people will complete building the mechanical structure of the bot.

Week 3:
3 people will start working on understanding electronics part (raspberry pi, usage of arduino etc) and building the electronics part of the bot. The other person will start working on voice recognition.

Week 4:
Finish the electronics part of the bot and trying to put together the electronics, mechanical and AI part together.

Week 5:
Debugging and thinking about the possibilities for improvisation and user friendliness.

Week 6:
Buffer week

Components:
1. Raspberry Pi and 1 Arduino Uno.
2. Chessboard made of wood with size of each squares almost 2 times each piece.
3. Chess coins.
4. Wood to make the frame.
5. 2 Stepper motors to control the movement of the x axis and y-axis on the chessboard.
6. 1 Servomotor for z-axis motion for lifting pieces.
7. An electromagnet for lifting the pieces.
8. Small iron pieces on each piece to lift it.
9. Voice recognition Module v3.
10. A couple of rack shafts and 5 Drawer Bearings to move the frame in x and y direction.
11. Battery eliminator (ac to dc converter) to supply power to the various electrical Components.
12. Screws and nuts to fix the entire arrangement in place.
13. A couple of Stepper motor drivers and voltage regulators.
14. Wires to complete the circuit.

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<u>Learning: -</u>

- Artificial Intelligence algorithms for chess.
- Voice recognition.
- understand the simple working of circuits
- Using Raspberry Pi and Arduino Uno.
- Java Programing language.
- Learning solid works.