

1)

Watson is a supercomputer built by IBM to decode tricky questions posed in English and answer them correctly within seconds. With this power to retrieve human knowledge like this, it can easily apply for a lot of things. For example, it can be applied as a new wikipedia where people can ask question and Watson can answer them. Another application of Watson is for education. It can be a teaching assistance to help teacher to teach student.

A game like chess is easier because each game piece has the move rules and the game has its own rule. Therefore, basically, AI system used in chess is mostly finding the possible and best move which is not too ambiguous. Computers are very good in handling computing things like that. Meanwhile, Jeopardy requires human language which is hard to determine since it is ambiguous, has no formula and depends on the context. Computers are very weak in contextual awareness which explains why creating an AI system for Jeopardy is much harder.

There is a Poker game which a computer can beat a human

1B)

Chinese room argument is that the computer is basically syntactic and formal which means it does not have semantic (mental content of human mind). This is concluded with the example that a person will know Chinese by being taught to put different symbols together although he actually does not know.

I agree with the argument. Machines do what people tell them to do. A machine cannot do something that it was not programmed. It is similar to the way how humans learn to put symbols together

1C)

Tower of Hanoi:

State: List of stacks, each stack element compared to size of the disk, the stack's first element is the top disk

Initial State: [1,2,3],[],[ ]

Actions: Move a disk from one stack to another. Requirement is bigger disk has to be below smaller disk

Goal: [],[ ],[1,2,3]

Cost: 1/move

Pacman:

State: pacman position, enemy position, direction, list of pellets

Initial state: [1,1],[[2,3],[5,4]],up,[[1,2]]

Action: left, right, down, up

Goal : \*,\*,\*,\*[]

Cost: 1/move