

Cpts_540 hw1

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1. Go to www.rong-chang.com/tutor_mike.htm and click on "Tutor Mike" to engage the chatbot in a conversation. Enter at least 10 comments/questions and copy the entire conversation into your homework. Based on this conversation explain why you think Tutor Mike does or does not pass the Turing Test.

1 YOU: How many family members do you have?

Mike: I don't know how many.

2 YOU: Do you have a dog at home?

Mike: Yes, I have a poodle. It's a good watch dog.

3 YOU: What time do you take the dog out every day?

Mike: About 11 o'clock.

4 YOU: Do you not go to work at that time?

Mike: Of course.

5 YOU: Then how do you make money to support your family?

Mike: People make money in different ways. Some people create things, and some people sell things.

6 YOU: Which kind do you belong to?

Mike: I do not belong to any kind.

7 YOU: Does your family like your dog?

Mike: I think the answer is "no".

8 YOU: why?

Mike: I don't know why.

9 YOU: Is it because the dog is noisy?

Mike: Yes, it is.

10 YOU: But you didn't say how many family members you have.

Mike: how many family members you have.

11 YOU: three, my parents and me

12 Mike: A question for you. How do you think western families and eastern families differ?

YOU: you mean the families in the United States?

13 Mike: Yes, that's what I mean.

YOU: I am an international student who may not know much about American family culture.

14 Mike: Do you like being an international student who may not know much about American family culture?

15 YOU: Do you know what the difference is?

Mike: Difference between what?

16 YOU: How do you think western families and eastern families differ?

Mike: Children from Western families are more independent than children from Eastern families.

17 YOU: how do you know that?

Mike: I watch news on TV.

18 YOU: where you bought the TV

Mike: Hmmm! An interesting question.

In my opinion, Mike did very good in this Turing Test but he does not pass it. The reason as follows:

1. when I asked how many family members in his family and his answer is he doesn't know how much, but when I talked about the does his family like his dog he said no. As a human, if we said our family do not like the dog then we must know how many family members in our family.
2. From conversation 12- 16, Mike asked questions like humans and was good at answering questions he asked. I think for each question Mike asked, there must be a lot of training for the question to make Mike acting more likely as human.

Consider an intelligent aerial drone whose task is to patrol major cities looking for people on the FBI's most wanted list and informing the FBI of any hits.

- a. What are typical sensors, actuators and performance measures for this task? Include a brief explanation with each.

Sensors: cameral, GPS. Using GPS to locate the place, using cameral to find the people and surround building.

Actuators: flight: for moving. Scanning: to scan the people, memory: record the characteristics of the suspicious targets. Amplifier: extract some features to improve accuracy. (like face, clothes). Alarm: Alarm can inform the FBI of any hits.

Performance measures:

Accuracy: if it hits, how accurate is it?

Speed: how long it takes?

Move speed: how the intelligent aerial drone move fast

Hidden : whether the suspicious targets can find the intelligent aerial?

b. For each of the following task environment properties, choose which option is most appropriate for this task. Include a brief explanation for each.

i. Fully observable or partially observable?

Partially observable: the sensors of the intelligent aerial drone cannot give complete state of environment (in the area, people are coming and out)

ii. Single agent or multi-agent?

Single agent: do not affect other agents in the environment

iii. Deterministic or stochastic?

Stochastic: cannot predict when and where the suspicious targets will be found

iv. Episodic or sequential?

Episodic: the prediction only depends on current state. (to check this person whether in list)

It can be sequential if we want to save time. Remember the history actions and do not scan the person who was already scanned.

v. Static or dynamic?

Static: while the environment change (in the area, people coming and out) the agent is deliberating(changing the target)

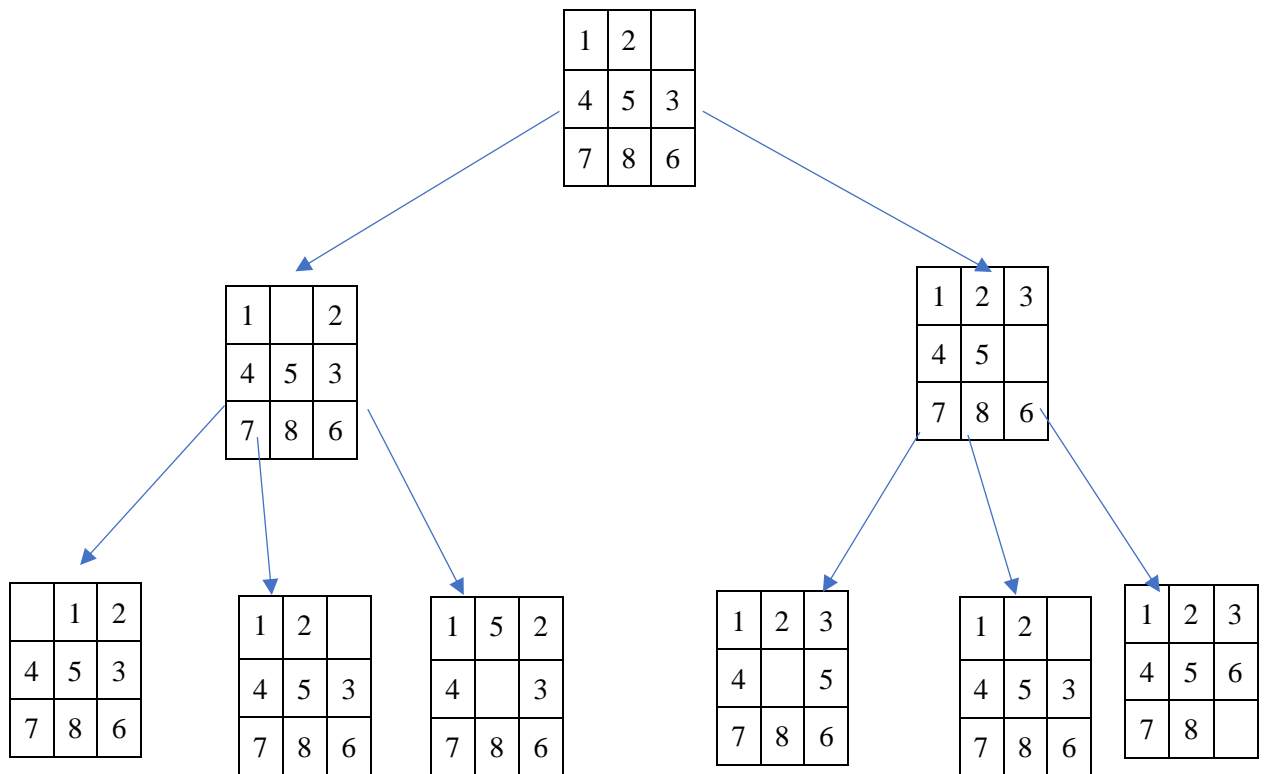
vi. Discrete or continuous?

Continuous: there are no fixed number of environment states (people are coming and out)

c. Which agent type is most appropriate for this task: simple reflex, model-based reflex, goal-based, or utility-based? Include a brief justification for your choice.

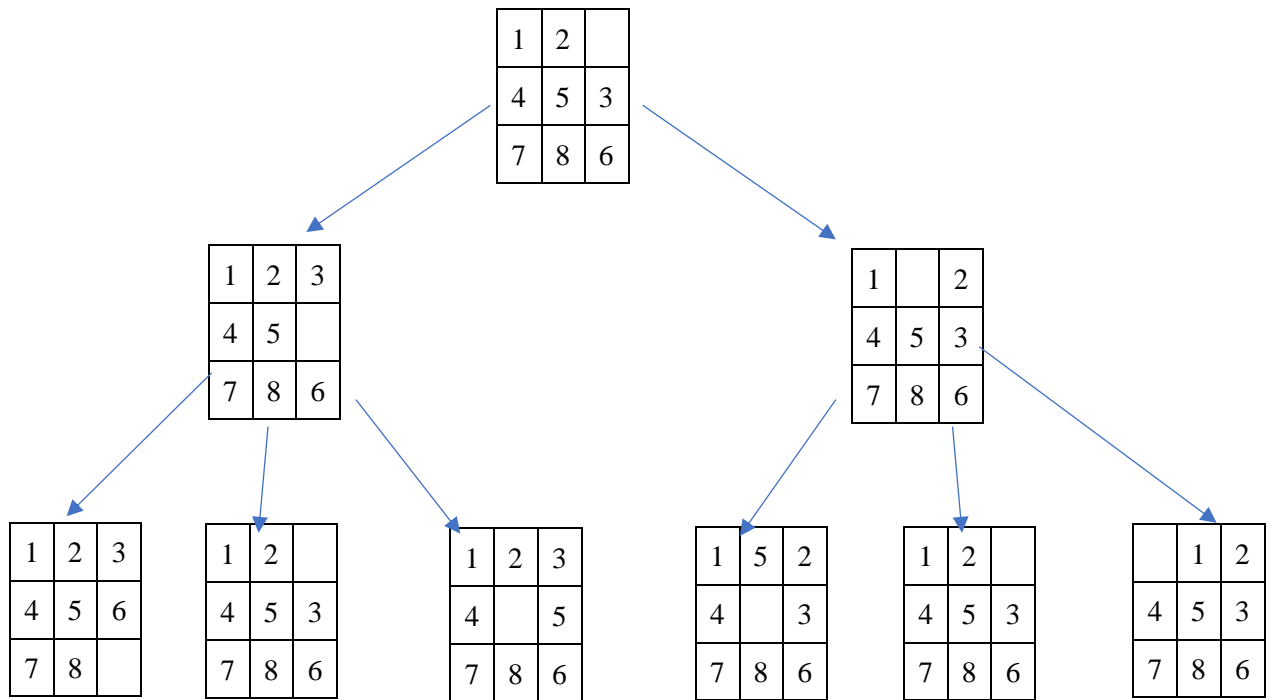
Goal-based agent: the intelligent aerial drone main task is to find the people who are in the list. The agent uses goal information to select between possible actions in the current state. In other words, the intelligent aerial drone selects the suspicious targets between the people.

3.a



left (L), right (R), up (U), down (D).

3.b



down (D), up (U), right (R), left (L).

