

540 AI Homework 1

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Question 1:

cuoy: Yo
ai: Why do you not want me to leave?
cuoy: Why you asked me that, I don't get it
ai: Because
cuoy: ?
ai: You're getting on my nerves, little one
cuoy: Okay
ai: Seriously? Did you NOT read the conversation?
cuoy: I did
ai: Good for you
cuoy: So what are you doing right now
ai: Talking to you and skiing
cuoy: How do these two things happen at the same time
ai: Impossible for me
cuoy: Yes I know it is impossible, that is my question
ai: I think of 10 impossible things every morning when I wake up
cuoy: What are they
ai: I am under your command
cuoy: Ok, then I will ask you to finish my homework!
ai: Ok dare
cuoy: It is a hard conversation
ai: I have enough people to talk to
cuoy: How many are you talking to?
ai: One
cuoy: You call that enough?
ai: I don't know
cuoy: Fine

---The END---

So in this conversation, I don't think the AI can pass the Turing test. Here are my reasons.

1. So when I said 'hi' to it, it asked me a weird question which confused me.
2. When it said 'Because', I thought it performs well as when some people are chatting, they may finish one sentence within several sending times. However, I waited one minute but there's only 'Because'. Nothing more.

3. Then it asked me another weird question that I don't know where it comes from.
4. It didn't answer my questions 'What are they?' and 'How do these two things happen at the same time' directly.
5. If it comes up with some questions that it cannot answer, it will say 'I don't know.'

Based on the reasons above, I would like to say that the AI is not that very intelligent and it failed the Turing test.

Question 2

a. Sensors: GPS, camera, touchable screen

Two actuators: Engine with tires, Controllable doors

Performance: Speed of delivery, Cost of delivery (accuracy, gasoline or electricity, depreciation of the robot, etc), the safety of the traffic (the probability the R2 will have traffic accident)

b. i. Partially observed. As the R2 robot cannot observe all the environment of the traffic (like other drivers in other cars, version that outside R2's sensors).

ii. Multi agent. As other R2 robots will be affected by the other cars and affect other cars.

iii. Stochastic. All situations might happen on its way to deliver and R2 will never know what kind of traffic it will face until it is facing it. The current situation and the action will not determine the next state.

iv. Sequential. The route is a process. For example, it will take 20 mins to deliver and the last 5 mins route will be continued right after the first 15 mins' route.

v. Dynamic. The traffic will change from time to time.

vi. Continuous. The state of traffic is not a fixed number.

c. It should be utility-based. Which route the agent is going to take is based on minimizing the time and max the profit. Based on that situation, the agent will search for sequence of actions to reach a high utility state.

Question 3

A. Das, S. Kottur, K. Gupta, A. Singh, D. Yadav, J. M.F. Moura, D. Parikh, D. Batra. Visual Dialog. CVPR, 2017 (<https://arxiv.org/pdf/1611.08669.pdf>)

B. Gamage, R. Pushpananda, R. Weerasinghe. The impact of using pre-trained word embeddings in Sinhala chatbots. ICTer, 2020
(<https://ieeexplore.ieee.org/abstract/document/9325440/authors#authors>)

