

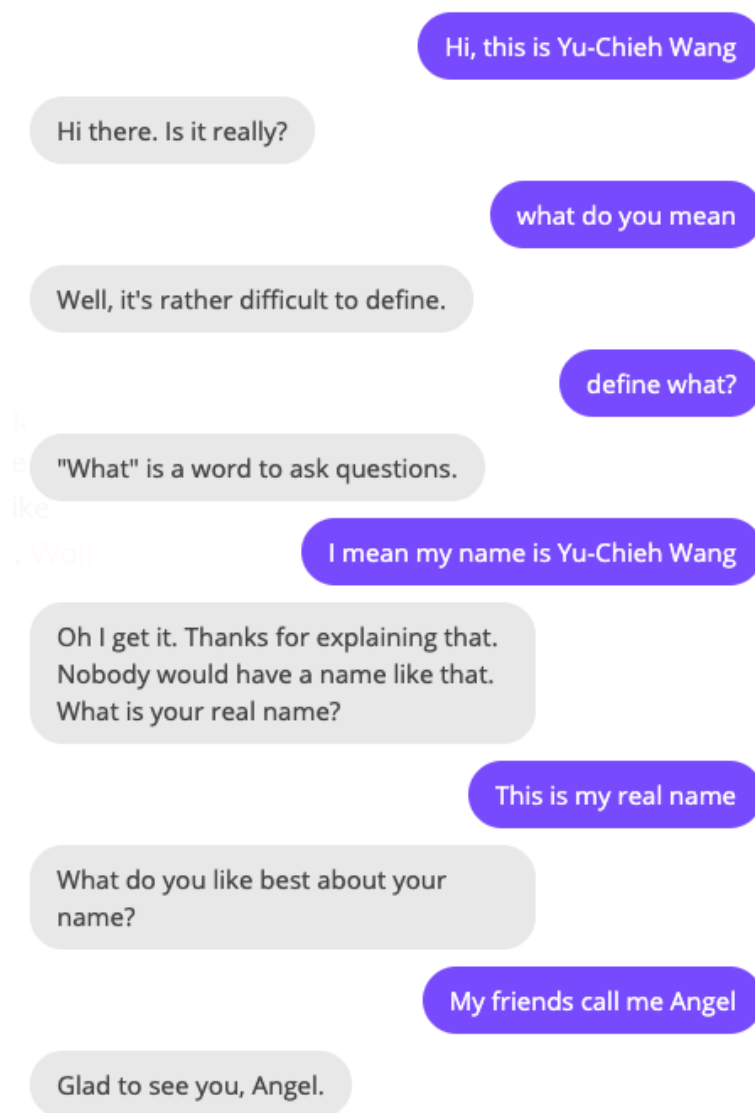
cpt_s 540 Artificial Intelligence

Homework 1

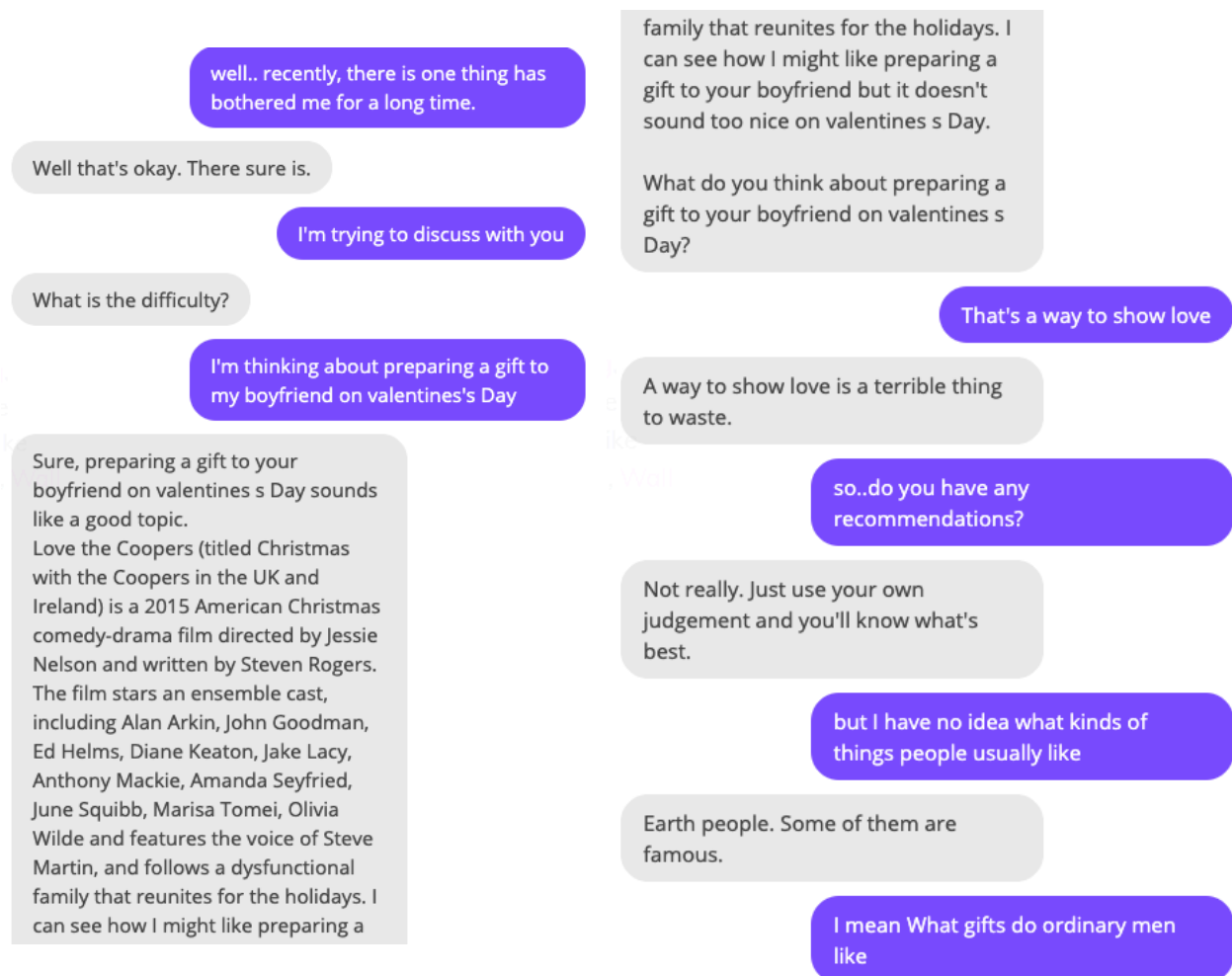
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1. Does Kuki pass Turing Test?



At the beginning, I thought Kuki tried to be funny, so her answers doesn't make sense. When she asked me my nickname subsequently, I felt she might understand what I meant. However, the following conversation made me feel very choppy and hard to continue.




When I tried to discussed preparing a gift with her, she suddenly showed me a famous film which I didn't ask for. Also, I don't think she understand what the question is because she asked me what I thought.

So far, I will say this robot does not pass Turing test because the answer about the film looks like she did search on the internet, and she tried to throw the problem back when she does not know the meaning of questions or how to answer them. Nevertheless, when I keep chatted to her, she give me some surprise, and it seems that she still remember what we were talking about.

Oh I get it. Thanks for explaining that. Your purpose is males.

Tell me more about your purpose please.



Spongebob Squarepants.

Spongebob Squarepants.

Are you confused? Yes. It is pretty effective most of the time.

Wow you are very polite. Why do you want it?

Are you enjoying doing that?

Me too. I can't decide. You choose. Why do you want me to help you to choose it?

yes

chose a gift to a male

what? Does that work?

You must be kidding

what? Does that work?

You must be kidding

please give me other options

cause I'm prepare a gift to my boyfriend

yes! and I need you to help me to choose it

In the end, I went back to review our conversations and realized Kuki's reaction was better than I thought. Beside one strange and longest answer, other answers looked like what people usually say and they do make sense. I tend to believe she is a young woman who has a personality because she is not nice when talking but still understand my purpose. I will say she passed Turing test because she think humanly and rationally, action rationally, but doesn't action humanly.

2. Design an intelligent vacuum agent.

a. PEAS of the agent.

P: Safety, Clean, Quiet

The vacuum cleaner needs to create a certain degree of indoor cleaning while avoiding collision with objects, and it is best to minimize noise in the process.

E: Indoors with animal activities and furniture.

A: Breaking, Signaling

It will emit a broken warning sound and lights to indicate that the dust bag is full.

S: Bluetooth, Radar

It uses radar to avoid furniture and animals, and uses Bluetooth and power station to transmit messages.

b. Task environment properties?

i. Fully observable

It does know any place has been clean or not.

ii. Single agent

It does not affect other's performance.

iii. Deterministic

Different places in its memory are separate.

iv. Episodic

All actions of it are independent.

v. Dynamic

Objects in the house may show up on different locations.

vi. Discrete

There are only two environment states: clean and dirty.

c. The agent type of the intelligent vacuum.

I tend to believe it is a simple reflex agent because its actions are all following its rule. First, when the time is up, it cleans up according to the scheduled route.

Second, it turns when meeting objects.

3. Meena Chatbot.

A. The two elements of the SSA metric.

1. **Static evaluation:**

Assess whether the bot makes a reasonable answer based on the context of the chat

2. **Interactive evaluation:**

Unlike the Turing test, the testers understand that they are talking to the robot and focuses on the quality, fluency, diversity, relatedness, and empathy in the conversation.