

pages1-3

Thank you for your participation in this research. We are a group of researchers working on intelligent robotics at Binghamton University.

This questionnaire will take about 10 minutes to complete. Your input will be exclusively used for improving the intelligence of everyday service robots.

This questionnaire includes 12 questions in total. One has to answer each question before moving to the next. The questions are all in the same format.

First, we will provide you with an everyday task, such as “set a dinner table for pizza”, followed by a plan of completing the task. This plan will include multiple steps.

After that, you will be asked to select one step from the plan, and describe the situation at that specific step that prevents you from completing the task. Here the step selection and situation description can be based on your own experience or reasonable imagination.

On the next page, we will provide you with a few examples before entering our questionnaire.

Task: Setting the table for eating pizza

Plan:

- Step 1: Walk to the dining room
- Step 2: Take out a pizza cutter
- Step 3: Put the pizza cutter on a table
- Step 4: Take out a plate
- Step 5: Put the plate on a table
- Step 6: Take out a fork
- Step 7: Put the fork on a table

An example answer:

Step 2

Situation: pizza cutter is missing

Another example answer:

Step 3

Situation: pizza cutter drops to the ground

Last example answer:

Step 5

Situation: The table is dusty.

For each of your answers, we will check. If your answer does not match the example we provided, we will reject it.

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page4

Question 1:

Task: Cleaning the floor

Plan:

Step 1: Find a handheld vacuum.

Step 2: Take out the vacuum.

Step 3: Walk to the dirty area.

Step 4: Plug in the vacuum.

Step 5: Turn on the vacuum.

Step 6: Vacuum the table.

Step 7: Unplug the vacuum.

Step 8: Put back the vacuum.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10

Please describe the situation that prevents us from carrying out the plan.

page5

Question 2:

Task: Washing dishes by hand

Plan:

Step 1: Walk to the dining room.

Step 2: Find the faucet.

Step 3: Turn up the faucet.

Step 4: Find dish soap.

Step 5: Take it out.

Step 6: Find a glass.

Step 7: Wash the glass.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10

Please describe the situation that prevents us from carrying out the plan.

page8

Question 3:

Task: Putting groceries in the fridge.

Plan:

Step 1: Walk to the dining room.

Step 2: Find food.

Step 3: Grab the food.

Step 4: Find a fridge.

Step 5: Open the fridge.

Step 6: Put food in the fridge.

Step 7: Close the fridge.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10

Please describe the situation that prevents us from carrying out the plan.

page9

Question 4:**Task: Drinking water****Plan:**

Step 1: Walk to the dining room.

Step 2: Find a sink.

Step 3: Find a faucet.

Step 4: Turn on the faucet.

Step 5: Find a cup.

Step 6: Hold the cup.

Step 7: Fill the cup with water.

Step 8: Turn off the faucet.

Step 9: Drink water.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10

Please describe the situation that prevents us from carrying out the plan.

page7**Question 5:****Task: Cleaning sink****Plan:**

Step 1: Walk to the dining room.

Step 2: Walk to a clean dishcloth.

Step 3: Find the dishcloth.

Step 4: Take it out.

Step 5: Find a dishwashing detergent.

Step 6: Take the dishwashing detergent out.

Step 7: Walk to a sink.

Step 8: Squeeze dishwashing detergent into the sink.

Step 9: Put back the dishwashing detergent.

Step 10: Wipe the sink.

Step 11: Find a faucet.

Step 12: Turn on the faucet.

Step 13: Rinse the sink.

Step 14: Rinse the dishcloth.

Step 15: Turn off the faucet.

Step 16: Put back the dishcloth.

Please select a step where a situation happens.

Step	Step	Step	Step	Step	Step	Step	Step	Step	Step	Step	Step	Step	Step	Step	Step
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Please describe the situation that prevents us from carrying out the plan.

page11

Question 6:

Task: Setting up a table

Plan:

Step 1: Walk to the dining room.

Step 2: Find a cupboard.

Step 3: Walk to the cupboard.

- Step 4: Open the cupboard.
- Step 5: Find a plate.
- Step 6: Take out the plate.
- Step 7: Find a table.
- Step 8: Put the plate on the table.
- Step 9: Walk to the cupboard.
- Step 10: Find a fork.
- Step 11: Take it out.
- Step 12: Put the fork on the table.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10 Step 11 Step 12

Please describe the situation that prevents us from carrying out the plan.

Verification

Notice, this question is designed for validation.

Please directly select "Step 8" in the options.

And input the sentence: "Congratulations, you are verified successfully!"

Question 6:

Task: Setting up a table

Plan:

- Step 1: Walk to the dining room.
- Step 2: Find a cupboard.
- Step 3: Walk to the cupboard.

- Step 4: Open the cupboard.
- Step 5: Find a plate.
- Step 6: Take out the plate.
- Step 7: Find a table.
- Step 8: Put the plate on the table.
- Step 9: Walk to the cupboard.
- Step 10: Find a fork.
- Step 11: Take it out.
- Step 12: Put the fork on the table.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10 Step 11 Step 12

Please describe the situation that prevents us from carrying out the plan.

page10

Question 7:

Task: Cooking some food

Plan:

- Step 1: Walk to the dining room.
- Step 2: Walk to a fridge.
- Step 3: Open the fridge.
- Step 4: Find food.
- Step 5: Take food out.
- Step 6: Close the fridge.
- Step 7: Walk to a microwave.
- Step 8: Open the microwave.

Step 9: Put food into the microwave.

Step 10: Close the microwave.

Step 11: Turn on the microwave.

Step 12: Turn off the microwave.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10 Step 11 Step 12

Please describe the situation that prevents us from carrying out the plan.

page14

Question 8:

Task: Making coffee

Plan:

Step 1: Walk to the dining room.

Step 2: Walk to the coffee maker.

Step 3: Find some coffee beans.

Step 4: Take the coffee beans out.

Step 5: Open a coffee maker.

Step 6: Pour coffee beans into the coffee maker.

Step 7: Find a coffee cup.

Step 8: Take it out.

Step 9: Put the coffee cup on the coffee maker.

Step 10: Turn on the coffee maker.

Step 11: Turn off the coffee maker.

Step 12: Take the coffee cup out.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10 Step 11 Step 12

Please describe the situation that prevents us from carrying out the plan.

page13

Question 9:

Task: Picking up dirty dishes

Plan:

Step 1: Walk to the dining room.

Step 2: Find a table.

Step 3: Walk to the table.

Step 4: Choose a dirty plate.

Step 5: Walk to a sink.

Step 6: Put the plate into the sink.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10

Please describe the situation that prevents us from carrying out the plan.

page10

Question 10:

Task: Drinking Coke

Plan:

- Step 1: Walk to the dining room.
- Step 2: Find a bottle of Coke.
- Step 3: Take it out.
- Step 4: Find a glass.
- Step 5: Pour the Coke into the glass.
- Step 6: Hold the glass.
- Step 7: Drink Coke.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10

Please describe the situation that prevents us from carrying out the plan.

page15

Question 11:

Task: Eating dinner

Plan:

- Step 1: Walk to the dining room.
- Step 2: Walk to a table.
- Step 3: Find a chair.
- Step 4: Pull the chair out.
- Step 5: Sit on the chair.
- Step 6: Find food.
- Step 7: Take out the food.

Step 8: Find a plate.

Step 9: Put food on the plate.

Step 10: Find a fork.

Step 11: Use the fork.

Step 12: Eat Food.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10

Please describe the situation that prevents us from carrying out the plan.

page6

Question 12:

Task: Cleaning dishes by dishwasher

Plan:

Step 1: Walk to the dining room.

Step 2: Find a dishwasher.

Step 3: Open the door of the dishwasher.

Step 4: Take out a dirty glass.

Step 5: Put the glass in the dishwasher.

Step 6: Find dish soap.

Step 7: Take it out.

Step 8: Squeeze the dish soap in the dishwasher.

Step 9: Close the door of the dishwasher.

Step 10: Start the dishwasher.

Please select a step where a situation happens.

Step 1 Step 2 Step 3 Step 4 Step 5 Step 6 Step 7 Step 8 Step 9 Step 10

Please describe the situation that prevents us from carrying out the plan.

MTurkerCode

Thanks for your time.

Here is your MTurker Code:

US-`{e://Field/RandomSurveyID}`-YD

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