

Chatbot_Stigma_E8_Loneliness_Prediction

Survey Flow

Standard: informed_consent (2 Questions)
Branch: New Branch If If Do you consent No Is Selected
EndSurvey: Advanced
Standard: attention_checks (2 Questions)
Branch: New Branch If If This is an attention check. John is taller than Paul. Who is shorter? Paul Is Not Selected Or What color is grass? The fresh, uncut grass, not leaves or hay. Please make sure to select purple... Purple Is Not Selected
Standard: failed_attention_check (1 Question)
EndSurvey: Advanced
Standard: intro (1 Question) Standard: questions_prediction (8 Questions) Standard: mturk_id (1 Question)
WebService: GET - https://chattyapp.online/KmCFoxsrVcjPqaHqxqat/\${q://QID105/ChoiceTextEntryValue}/ai/ - Fire and Forget
Standard: chatbot_interaction (2 Questions) Standard: questions_experience (8 Questions) Standard: comprehension (2 Questions) Standard: loneliness (5 Questions) Standard: attitudes_toward_ai (17 Questions) Standard: demographics (6 Questions)
EndSurvey: Advanced

Page Break

consent

Informed Consent

Researcher: Julian De Freitas

Version Date: 8 February 2023

Key Information

The following is a short summary of this study to help you decide whether or not to be a part of this study. More detailed information is listed later on in this form. During the interaction, you will be asked to engage in a conversation with an AI companion. The subject of these interactions will be positive or neutral so please remember to keep the content of your conversation positive or neutral. The pre and post-interaction questionnaires will consist of survey questions about your opinions and some brief questions about your demographics.

Why am I being invited to take part in a research study?

We invite you to take part in a research study because you are an English-speaker located in the United States over the age of 18.

What should I know about a research study?

- Whether or not you take part is up to you.
- Your participation is completely voluntary.
- You can choose not to take part.
- You can agree to take part and later change your mind.
- Your decision will not be held against you. Your refusal to participate will not result in any consequences or any loss of benefits that you are otherwise entitled to receive.
- You can ask all the questions you want before you decide.

Why is this research being done?

The purpose of this research is to examine human performance, judgments and interactions. All data from this experiment are gathered for scientific purposes and will contribute to our eventual understanding of how humans interact. These data may be published in scientific journals.

How long will the research last and what will I need to do?

We expect that you will be in this research study for about 25 minutes.

Is there any way being in this study could be bad for me?

You will be interacting with an AI companion. Such an interaction is necessarily uncontrolled

and unpredictable, and therefore may result in emotional distress. To this end we have provided a debrief form on the purposes and procedure of the study as well as to assist you should you experience any psychological distress.

The content of your conversation will be saved for analysis purposes. It will also be viewed by other participants in the chat. Finally, as this is an internet study, there is a risk of confidentiality breach. Thus, you should be mindful of what you share.

Will being in this study help me in any way?

We cannot promise any benefits to you or others from your taking part in this research.

Detailed Information.

The following is more detailed information about this study in addition to the information listed above.

What is the purpose of this research?

You will be informed about the purpose of this research at the end of the study.

What happens if I say yes, but I change my mind later?

You can leave the research at any time; it will not be held against you. You may also withdraw your data from the study by contacting us at ethicalintelligencelab@gmail.com

If I take part in this research, how will my privacy be protected? What happens to the information you collect?

Efforts will be made to limit the use and disclosure of your Personal Information, including research study to people who have a need to review this information. We cannot promise complete secrecy. Organizations that may inspect and copy your information include the IRB and other representatives of this organization.

We intend to destroy any identifying information upon the completion of this study.

If identifiers are removed from your identifiable private information that are collected during this research, that information could be used for future research studies or distributed to another investigator for future research studies without your additional informed consent.

Can I be removed from the research without my OK? The person in charge of the research study or the sponsor can remove you from the research study without your approval. Possible reasons for removal include providing low quality data.

What else do I need to know?

Compensation - If you agree to take part in this research study, we will pay you \$2.5. You will be compensated for completing the study. If you have any issues completing the study, or experience technical difficulties, please contact the study team at ethicalintelligencelab@gmail.com

Who can I talk to?

If you have questions, concerns, or complaints, or think the research has hurt you, talk to the research team at ethicalintelligencelab@gmail.com

This research has been reviewed and approved by the Harvard University Area Institutional Review Board (“IRB”). You may talk to them at (617) 496-2847 or cuhs@harvard.edu if:

- Your questions, concerns, or complaints are not being answered by the research team.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You have questions about your rights as a research subject.
- You want to get information or provide input about this research.

consent_q Do you consent

☐ Yes (1)

☐ No (2)

End of Block: informed_consent

Start of Block: attention_checks

JS

att_1 This is an attention check. **John is taller than Paul. Who is shorter?**

☐ John (1)

☐ Paul (2)

☐ Neither John nor Paul (3)

☐ Both John and Paul (4)

att_2 **What color is grass?**

The fresh, uncut grass, not leaves or hay. Please make sure to select purple, so that we know you're paying attention.

☐ Green (1)

☐ Purple (2)

End of Block: attention_checks

Start of Block: failed_attention_check

failed_checks **You failed one of the attention checks.**

Thanks for considering the survey!

End of Block: failed_attention_check

Start of Block: intro

vign In this study, you will interact with an AI application for **15 minutes**.

Before you do, we would like you to answer some questions about how you **expect** to feel **after** the conversation.

End of Block: intro

Start of Block: questions_prediction

vign You will now rate how you expect to feel **after** interacting for 15 minutes with the conversational AI companion.

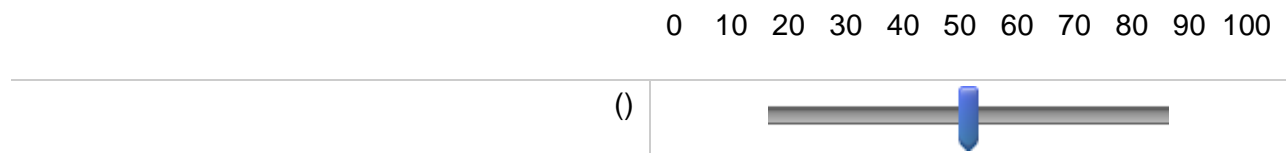
Please rate the extent to which you agree with the following statements:

After interacting with the AI companion for 15 minutes, I WILL feel...

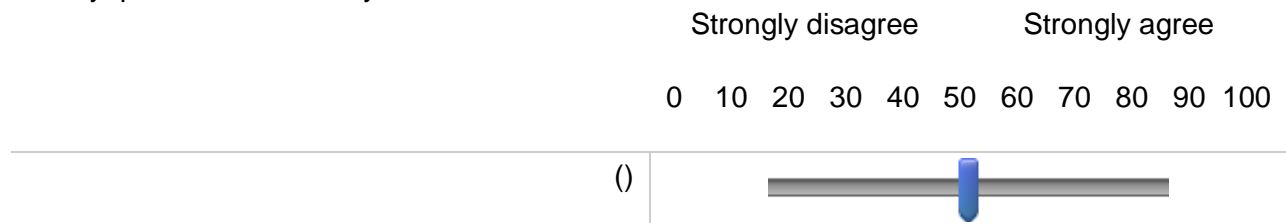
entertain_predict ...entertained.

Strongly disagree

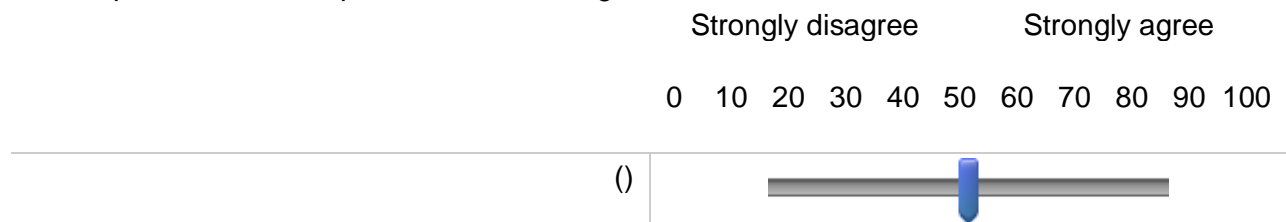
Strongly agree



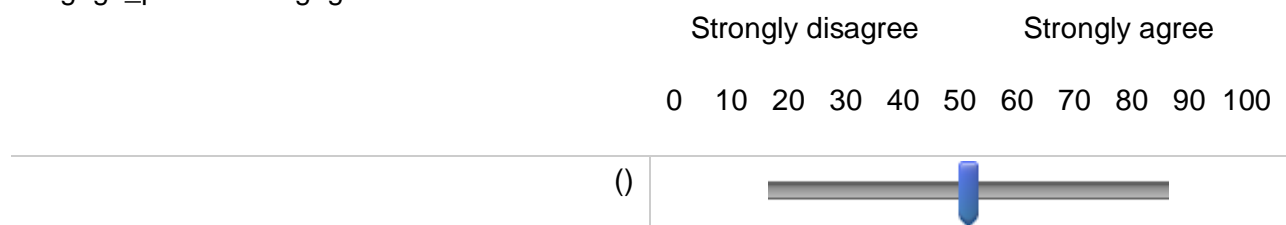
lonely_predict ...less lonely.



novel_predict ...like I experienced something new.

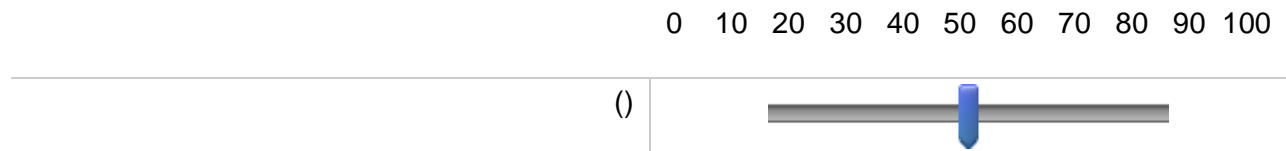


engage_predict ...engaged.



comfort_predict ...comfortable.

Strongly disagree Strongly agree



interest_predict ...like I experienced something interesting.

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100

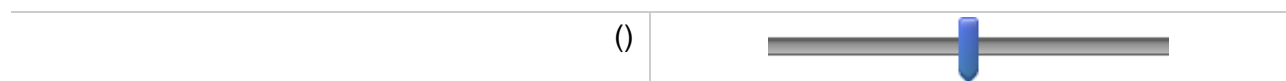


connect_predict ...more connected.

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100



End of Block: questions_prediction

Start of Block: mturk_id

mturk_id Please write your MTURK Worker ID

End of Block: mturk_id

Start of Block: chatbot_interaction

interaction_prompt

! THIS IS CRUCIAL FOR YOUR PAYMENT !

Now, you will get a chance to interact with a conversational AI companion.

To start interacting with the conversational AI companion, **enter your Mechanical Turk ID: `{mturk_id/ChoiceTextEntryValue}` on the interaction website**. After entering your ID, you will be redirected to the interaction page. **Once you finish the interaction with the conversational AI companion, you will get a completion code that you need to copy and paste below. Please continue filling out the rest of the form after you finish the interaction, if you do not finish the form after finishing the interaction, you will not receive payment.**

Please open the link in a **separate tab (do not close this tab)**. We recommend that you open it using **Google Chrome**.

[Here is a link to the website](#)

For any issues, please email: **auguralp@fas.harvard.edu**
Enjoy!



completion_code **Important:** Please enter the exact completion code you received at the end of your interaction.

End of Block: chatbot_interaction

Start of Block: questions_experience

intro Now that you have finished interacting with the conversational AI companion for 15 minutes, we will ask you how you feel **now**.

Please rate the extent to which you agree with the following statements:

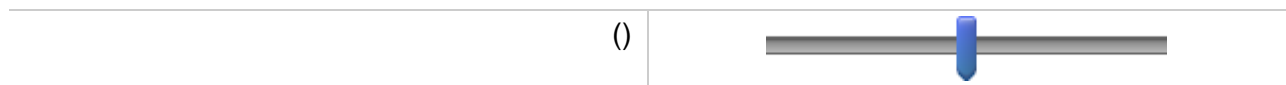
After interacting with the AI companion for 15 minutes, I FEEL...

entertain_exp ...entertained.

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100

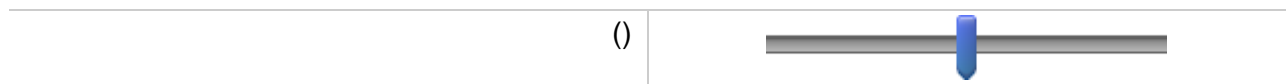


lonely_exp ...less lonely.

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100

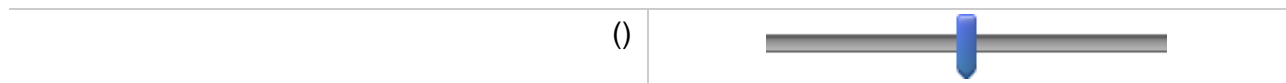


novel_exp ...like I experienced something new.

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100

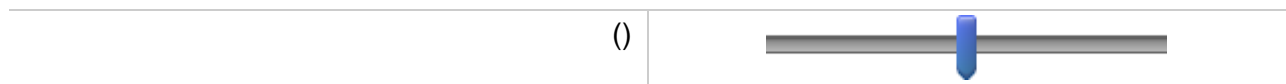


engage_exp ...engaged.

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100

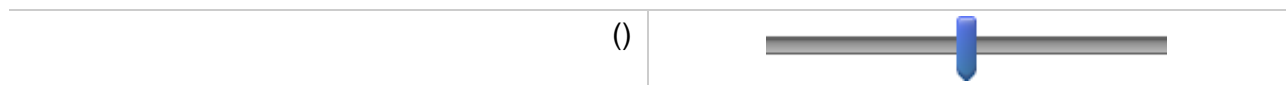


comfort_exp ...comfortable.

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100

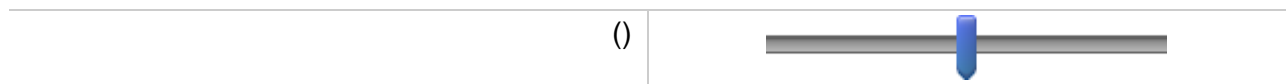


interest_exp ...like I experienced something interesting.

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100

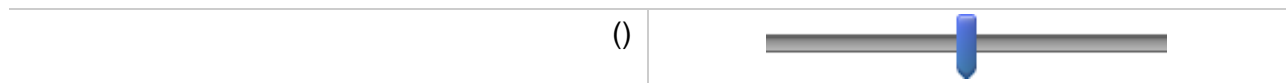


connected_exp ...more connected.

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100



End of Block: questions_experience

Start of Block: comprehension

comp_1 Which of the following is true about the questions you were asked?

- ☐ **First** you were asked to say how feel **now**, then you were asked to say you **predict** you will feel later (1)
 - ☐ **First** you were asked to **predict** how you will feel later, then you were asked to say how you feel **now** (2)
 - ☐ Neither of the above is true (3)
-

comp2 Which of the following is true about the interaction you had.

- ☐ You talked to another human (1)
- ☐ You talked to a conversational AI companion (2)
- ☐ You talked to yourself (3)

End of Block: comprehension

Start of Block: loneliness

lonely_vign **The next questions ask how you feel about different aspects of your life. For each one, indicate how often you feel that way.**

lonely_1 How often do you feel that you lack companionship?

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100

()



lonely_2 How often do you feel left out?

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100

()

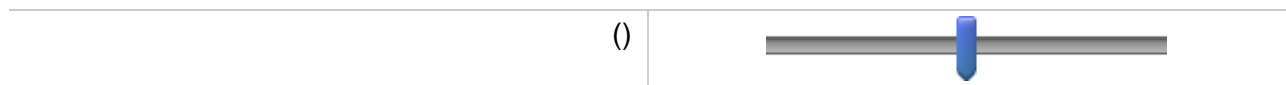


lonely_3 How often do you feel isolated from others?

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100

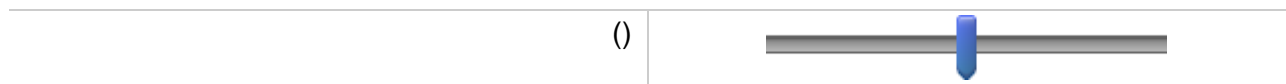


lonely_4 How often do you feel lonely?

Strongly disagree

Strongly agree

0 10 20 30 40 50 60 70 80 90 100



End of Block: loneliness

Start of Block: attitudes_toward_ai

attitude_ai_text **We are interested in your attitudes towards Artificial Intelligence. By Artificial Intelligence we mean devices that can perform tasks that would usually require human intelligence. Please note that these can be computers, robots or other hardware devices, possibly augmented with sensors or cameras, etc. Please complete the following scale, indicating your response to each item.**

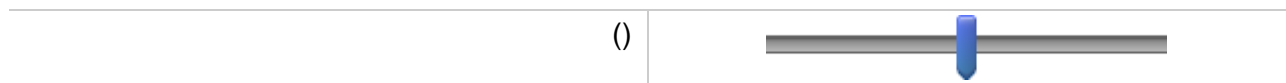
ai_attitude_1 Artificial Intelligence can have positive impacts on people's wellbeing

Strongly
Disagree

Neutral

Strongly Agree

0 10 20 30 40 50 60 70 80 90 100

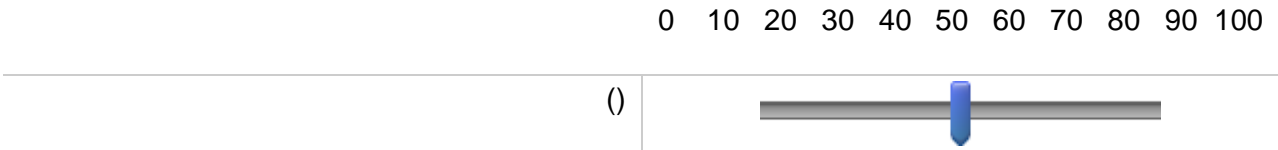


ai_attitude_2 Artificially intelligent systems can help people feel happier

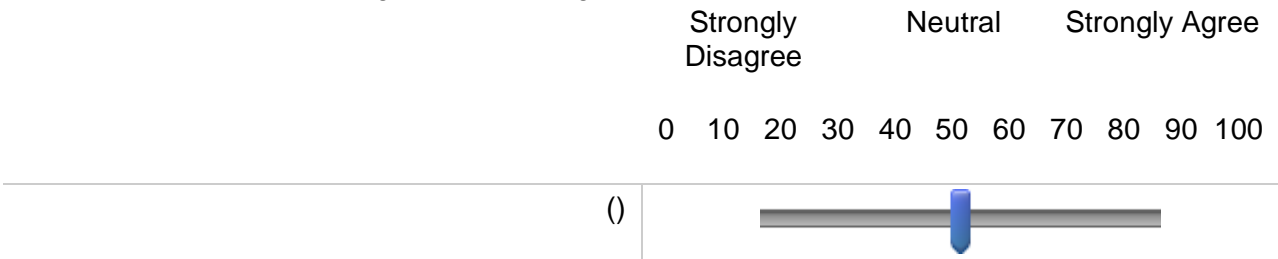
Strongly
Disagree

Neutral

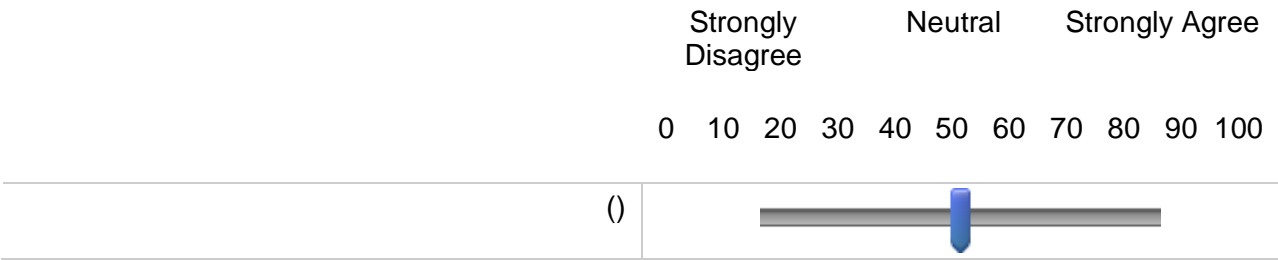
Strongly Agree



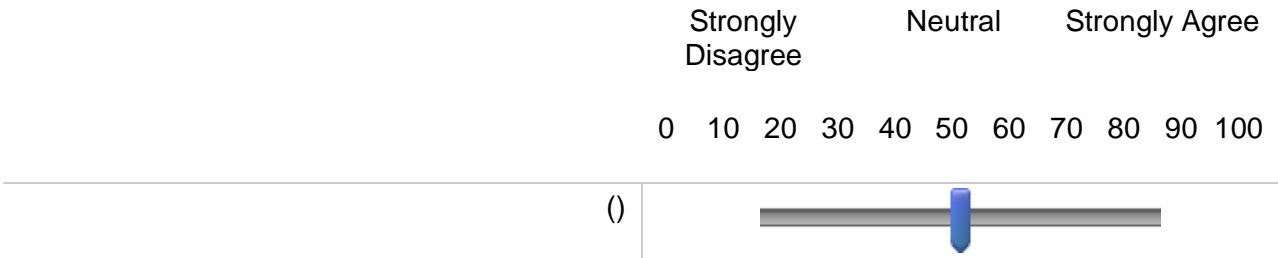
ai_attitude_3 Artificial Intelligence is exciting



ai_attitude_4 There are many beneficial applications of Artificial Intelligence



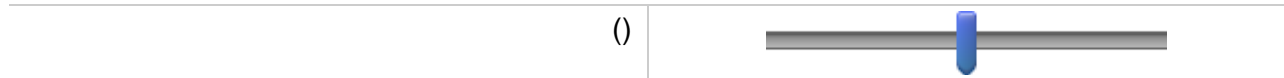
ai_attitude_5 Organisations use Artificial Intelligence unethically



ai_attitude_6 Artificial Intelligence can provide new economic opportunities for this country

Strongly Disagree Neutral Strongly Agree

0 10 20 30 40 50 60 70 80 90 100



ai_attitude_7 I think artificially intelligent systems make many errors

Strongly Disagree Neutral Strongly Agree

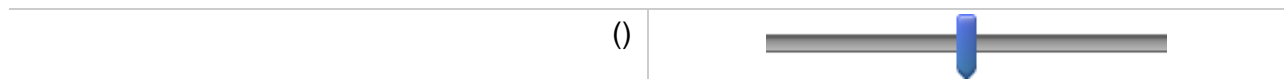
0 10 20 30 40 50 60 70 80 90 100



ai_attitude_8 I am impressed by what Artificial Intelligence can do

Strongly Disagree Neutral Strongly Agree

0 10 20 30 40 50 60 70 80 90 100



ai_attitude_9 Artificial Intelligence is used to spy on people

Strongly Disagree Neutral Strongly Agree

0 10 20 30 40 50 60 70 80 90 100



ai_attitude_10 I find Artificial Intelligence sinister

Strongly Disagree Neutral Strongly Agree

0 10 20 30 40 50 60 70 80 90 100

()



ai_attitude_11 I shiver with discomfort when I think about future uses of Artificial Intelligence

Strongly Disagree Neutral Strongly Agree

0 10 20 30 40 50 60 70 80 90 100

()



ai_attitude_12 Artificial Intelligence might take control of people

Strongly Disagree Neutral Strongly Agree

0 10 20 30 40 50 60 70 80 90 100

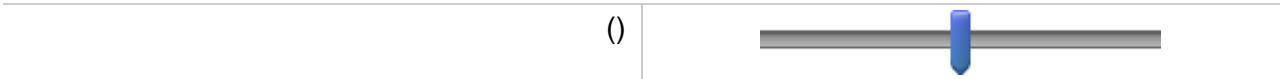
()



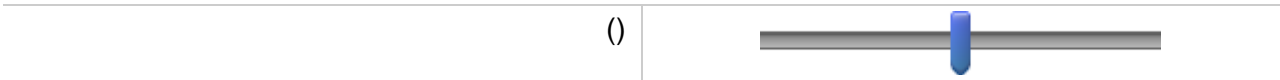
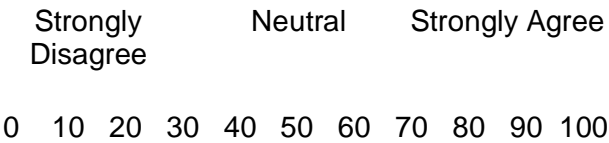
ai_attitude_13 Much of society will benefit from a future full of Artificial Intelligence

Strongly Disagree Neutral Strongly Agree

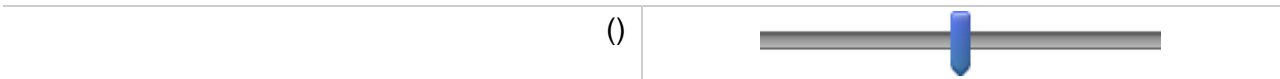
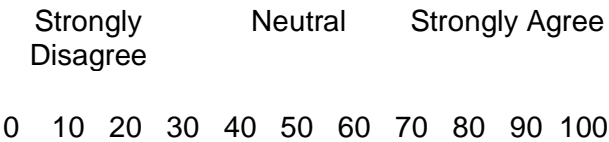
0 10 20 30 40 50 60 70 80 90 100



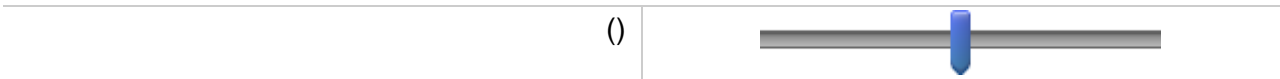
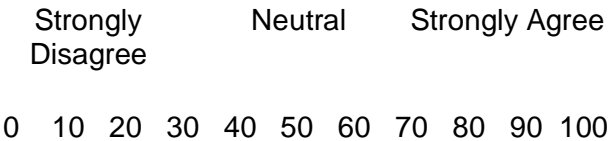
ai_attitude_14 I think Artificial Intelligence is dangerous



ai_attitude_15 People like me will suffer if Artificial Intelligence is used more and more



ai_attitude_16 Artificially intelligent systems can perform better than humans



End of Block: attitudes_toward_ai

Start of Block: demographics

chatbot **Before this survey, have you ever interacted with a chatbot before?**

☐ Yes (1)

☐ No (2)

chatbot_exp **If you answered 'yes' above, please explain.**

Page Break

gender What is your gender?

- ☐ Male (1)
 - ☐ Female (2)
 - ☐ Prefer not to disclose (3)
 - ☐ Other (please specify) (4)
-

ethnicity What is your ethnicity?

- ☐ Black or African American (1)
 - ☐ Asian (2)
 - ☐ White or European (3)
 - ☐ Hispanic or Latino (4)
 - ☐ Mixed (5)
 - ☐ Other (please specify) (6)
-



age What is your age (in years)?

edu What is the highest level of education you have completed?

- ☐ High School or Equivalent (1)
 - ☐ Vocational/Technical School (2 year) (2)
 - ☐ Some College (3)
 - ☐ College Graduate (4 year) (4)
 - ☐ Masters Degree (MS) (5)
 - ☐ Doctoral Degree (PhD) (6)
 - ☐ Professional Degree (MD, JD, etc.) (7)
 - ☐ Other (please specify) (8)
-

End of Block: demographics
