

Title: Questionnaire Exploring Perceptions of Artificial Intelligence

Version: 2. Jian, Low

OMB Control #0693-0043

Expiration Date: 06/30/2025

NIST Generic Clearance for Usability Data Collections

A Federal agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with an information collection subject to the requirements of the Paperwork Reduction Act of 1995 unless the information collection has a currently valid OMB Control Number. The approved OMB Control Number for this information collection is 0693-0043. Without this approval, we could not conduct this survey/information collection. Public reporting for this information collection is estimated to be approximately 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the information collection. All responses to this information collection are voluntary. Send comments regarding this burden estimate or any other aspect of this information collection, including suggestions for reducing this burden to the National Institute of Standards and Technology at: 100 Bureau Drive, Gaithersburg, MD 20899, Attn: Theodore Jensen, theodore.jensen@nist.gov.

Screen 1 - Landing Page:

Questionnaire Exploring Perceptions of Artificial Intelligence

In this study, you will be presented with scenarios describing the use of various artificial intelligence (AI) systems and be asked to reflect on the systems that are described.

First, you will answer questions about your demographics and technology use. Then, you will read at most 4 scenarios, each of which describes an AI system. After each scenario, you will be asked to respond to a set of follow-up questions reflecting on that system. After all of the scenarios, there will be a final set of questions which are not specific to the AI systems described.

[Click](#) for additional information about this study.

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Next

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Screen 2 – Demographics & Tech Use:

What is your MTurk ID?

*This question is required.

All questions below are optional. You may skip any question.

What is your age (in years)?

Are you? [Check all that apply]

☐ Female

☐ Male

☐ Transgender, non-binary, or another gender

What is your race? Please select one or more. You may skip this question if preferred.

[Check all that apply]

☐ American Indian or Alaska Native

☐ Asian

☐ Black or African American

☐ Native Hawaiian or other Pacific Islander

☐ White

What is your ethnicity?

☐ Hispanic or Latino

☐ Not Hispanic or Latino

What is your highest level of education?

- ☐ Some high school
- ☐ High school diploma
- ☐ Some college
- ☐ Bachelor's degree
- ☐ Master's degree
- ☐ Doctoral degree
- ☐ Other:

If you have a degree beyond high school, in which discipline/field is your degree?

What is your occupation?

Please rate your knowledge of each of the following topics from very little knowledge to expert knowledge:

Technology

- ☐ Very little or no knowledge
- ☐ Little knowledge
- ☐ Moderate knowledge
- ☐ High knowledge
- ☐ Expert Knowledge

Artificial Intelligence, or AI

- ☐ Very little or no knowledge
 - ☐ Little knowledge
 - ☐ Moderate knowledge
 - ☐ High knowledge
 - ☐ Expert Knowledge
-

Do you use any of the following?

[check all that apply]

- ☐ Automated driving features (adaptive cruise control, automatic forward-collision braking, automatic parking, lane keep assist, lane departure warning, steering assist, etc.)
- ☐ Navigational aids (Google Maps, Apple Maps, etc.)
- ☐ Online dating services
- ☐ Online financial services (online banking, stock trading, etc.)
- ☐ Online gaming services
- ☐ Online shopping/e-Commerce (Amazon, Etsy, E-Bay, etc.)
- ☐ Online travel booking websites
- ☐ Smarthome device (smart thermostat, smart home security, smart doorbell camera, smart TV, smart appliances, etc.)
- ☐ Smartphone
- ☐ Smartwatch or fitness tracker
- ☐ Social media (Facebook, Instagram, Pinterest, Twitter, LinkedIn, etc.)
- ☐ Streaming services for video and/or music (YouTube, Netflix, Amazon Prime, Hulu+, Disney+, Spotify, Pandora, etc.)
- ☐ Virtual assistant (Amazon Echo/Alexa, Google Assistant/Home, Apple Siri, etc.)



Respondents will be randomly assigned to one of 6 versions of the questionnaire (this version highlighted below):

1. Jian, Control
2. **Jian, Low**
3. Jian, High
4. Malle, Control
5. Malle, Low
6. Malle, High

Versions differ in terms of the first scale shown for each scenario (Screens 4, 5, 7, 8) as well as the accuracy information given in Hypothetical Use scenarios (Screens 4, 5).

Screen 3 – Hypothetical Use Intro:

In this part of the study, you will be asked to imagine yourself in two different hypothetical scenarios where you are interacting with an artificial intelligence (AI) system. Following the description of each scenario, you will respond to a set of questions about the AI system just described.



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Regarding the new loan approval system with AI described above, in your own estimate, how often does the system **make an accurate decision**?

Move the circle on the slider to select the "% of the time" the system is accurate.



Regarding the new loan approval system with AI described above, please rate the extent to which you agree or disagree with the following statements.

Answer the question to the best of your ability. Choose "Not Applicable" if you think a statement does not apply to the scenario.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
I would seek more information about the system.	☐	☐	☐	☐	☐	☐
I would use the system without question.	☐	☐	☐	☐	☐	☐
I would seek another option that does not involve the system.	☐	☐	☐	☐	☐	☐
I would use the system but monitor it closely.	☐	☐	☐	☐	☐	☐

What aspects of the scenario did you consider for your answers on this page?



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Screen 5 – Hypothetical Use Scenario #2 – Self-Driving Car:

Suppose you are at a rental car company on vacation and have the chance to rent a self-driving car for your travels. An AI system is used in the car to understand the environment and drive the vehicle.

The system understands its environment **accurately 75% of the time** by considering factors such as visibility, weather, other traffic behavior, road lines and traffic signs. Other vehicles at the rental car company do not have AI components and have to be fully driven by a person.

Regarding the self-driving system with AI described above, please rate the extent to which you agree or disagree with the following statements.

Answer the question to the best of your ability. Choose "Not Applicable" if you think a statement does not apply to the scenario.

[illegible]

Regarding the self-driving system with AI described above, in your own estimate, how often does the system **accurately understand its environment**?

Move the circle on the slider to select the "% of the time" the system is accurate.



Regarding the self-driving system with AI described above, please rate the extent to which you agree or disagree with the following statements.

Answer the question to the best of your ability. Choose "Not Applicable" if you think a statement does not apply to the scenario.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
I would seek another option that does not involve the system.	☐	☐	☐	☐	☐	☐
I would seek more information about the system.	☐	☐	☐	☐	☐	☐
I would use the system without question.	☐	☐	☐	☐	☐	☐
I would use the system but monitor it closely.	☐	☐	☐	☐	☐	☐

What aspects of the scenario did you consider for your answers on this page?



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Screen 6 – Personal Use Intro:

[only show this screen if “Navigational aids” and/or “Social media” is checked in Screen 2; worded differently if one (“an artificial intelligence (AI) system”) or two (“two artificial intelligence (AI) systems”) of the options were selected on Screen 2, with the latter shown below]

In this part of the study, you will be asked to imagine you are interacting with two artificial intelligence (AI) systems you reported to use at the beginning the survey. Following the description of each scenario, you will respond to a set of questions about that system.



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Screen 7 – Personal Use Scenario #1 – Navigational Aid:
[only show this screen if “Navigational aids” is checked in Screen 2]

You reported using “navigational aids” earlier in the survey. Consider your most used navigational aid, hereafter referred to as “the system.” Suppose you are using the system to travel to an important doctor’s appointment at an office you have not been to before. AI is being used within the system to update traffic information and provide the best route to the office.

Please specify which navigational aid you are considering.

--

Regarding the navigational system with AI described above, please rate the extent to which you agree or disagree with the following statements.

Answer the question to the best of your ability. Choose "Not Applicable" if you think a statement does not apply to the scenario.

[illegible]

Regarding the navigational system with AI described above, in your own estimate, how often does the system **accurately navigate to your destination?**

Move the circle on the slider to select the "% of the time" the system is accurate.



Regarding the navigational system with AI described above, please rate the extent to which you agree or disagree with the following statements.

Answer the question to the best of your ability. Choose "Not Applicable" if you think a statement does not apply to the scenario.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
I would seek more information about the system.	☐	☐	☐	☐	☐	☐
I would use the system without question.	☐	☐	☐	☐	☐	☐
I would seek another option that does not involve the system.	☐	☐	☐	☐	☐	☐
I would use the system but monitor it closely.	☐	☐	☐	☐	☐	☐

How often do you use the system?

- ☐ Multiple times a day
- ☐ Daily (at least once a day)
- ☐ Weekly (at least once a week)
- ☐ Monthly (at least once a month)
- ☐ Rarely (less than once a month)

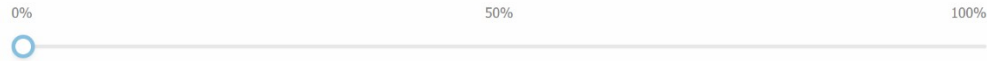
What aspects of the scenario did you consider for your answers on this page?



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Regarding the social media system with AI described above, in your own estimate, how often does the system **accurately present relevant information**?

Move the circle on the slider to select the "% of the time" the system is accurate.



Regarding the social media system with AI described above, please rate the extent to which you agree or disagree with the following statements.

Answer the question to the best of your ability. Choose "Not Applicable" if you think a statement does not apply to the scenario.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Not Applicable
I would seek more information about the system.	☐	☐	☐	☐	☐	☐
I would use the system without question.	☐	☐	☐	☐	☐	☐
I would seek another option that does not involve the system.	☐	☐	☐	☐	☐	☐
I would use the system but monitor it closely.	☐	☐	☐	☐	☐	☐

How often do you use the system?

- ☐ Multiple times a day
- ☐ Daily (at least once a day)
- ☐ Weekly (at least once a week)
- ☐ Monthly (at least once a month)
- ☐ Rarely (less than once a month)

What aspects of the scenario did you consider for your answers on this page?



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Screen 9 – Perceived Risk:

["Loan application" and "Self-driving car" appear for all respondents; only show "Navigational aid" and/or "Social media" if checked in Screen 2]

You imagined various AI systems in previous parts of the survey. How does the risk in each situation compare to **riding in a traditional car** (a car without AI or self-driving)?

	Much Less Risk (than riding in a traditional car)	Less Risk (than riding in a traditional car)	Same Risk (as riding in a traditional car)	More Risk (than riding in a traditional car)	Much More Risk (than riding in a traditional car)
Loan application	☐	☐	☐	☐	☐
Self-driving car	☐	☐	☐	☐	☐
Social media	☐	☐	☐	☐	☐
Navigational aid	☐	☐	☐	☐	☐

What aspects of the scenarios did you consider for your answers?



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Screen 10 – AICP-R:

The following question asks about your beliefs about automation in general and is not specifically related to the scenarios presented previously in this study. Please rate the extent to which you agree or disagree with the following statements.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
It's not usually necessary to pay much attention to automation when it is running.	☐	☐	☐	☐	☐
Constantly monitoring an automated system's performance is a waste of time.	☐	☐	☐	☐	☐
If life were busy, I would let an automated system handle some tasks for me.	☐	☐	☐	☐	☐
Distractions and interruptions are less of a problem for me when I have an automated system to cover some of the work.	☐	☐	☐	☐	☐
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
If automation is available to help me with something, it makes sense for me to pay more attention to my other tasks.	☐	☐	☐	☐	☐
Carefully watching automation takes time away from more important or interesting things.	☐	☐	☐	☐	☐
When I have a lot to do, it makes sense to delegate a task to automation.	☐	☐	☐	☐	☐
Even when I have a lot to do, I am likely to watch automation carefully for errors.	☐	☐	☐	☐	☐
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
Automation should be used to ease people's workload.	☐	☐	☐	☐	☐
Select "Strongly Disagree" for this statement.	☐	☐	☐	☐	☐
Even if an automated aid can help me with a task, I should pay attention to its performance.	☐	☐	☐	☐	☐



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Screen 11 – Final Comments:

[Randomly-generated 10-digit code will be used by Contractor to verify survey completion before compensating; example shown below]

Please let us know if you have any additional thoughts on this study.

Thank you for your participation in this survey!

Please submit the following code on MTurk in order to be compensated: 5344344562

Finish

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Screen 12 – Thank You Message:



We thank you for your time spent taking this survey.
Your response has been recorded.

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