

# Measuring Clarity Of Textual External Human Machine Interfaces For Automated Vehicles

## Instructions ^

You are invited to participate in a research study entitled "Measuring clarity of textual external Human Machine Interfaces for automated vehicles". The study is being conducted by Dr. Pavlo Bazilinskyy, Dr. Dimitra Dodou, and Dr. Joost de Winter, Department of Cognitive Robotics, Delft University of Technology, The Netherlands, p.bazilinskyy@tudelft.nl (mailto:p.bazilinskyy@tudelft.nl).

You are free to contact the investigator at the above email address to ask questions about the study. You must be at least 18 years old to participate. You will rate 80 images of a car with different textual messages on a display on the front bumper. The survey will take approximately 20 minutes of your time.

In case you participated in a previous survey of one of the present investigators, your responses may be combined with the previous survey. The information collected in the survey is anonymous. Participants will not be personally identifiable in any research papers arising from this study. If you agree to participate and understand that your participation is voluntary, then continue. If you would not like to participate, then please close this page. Before the study starts, the images will be preloaded. This may take a few minutes depending on your internet connection.

Please do not use Internet Explorer for this study.

## General questions

**Have you read and understood the above instructions? (required)**

- Yes
- No

**What is your gender? (required)**

- Male
- Female
- I prefer not to respond

**What is your age? (required)**

**In which type of place are you located now? (required)**

- Indoor, dark
- Indoor, dim light
- Indoor, bright light
- Outdoor, dark
- Outdoor, dim light

- Outdoor, bright light
- Other
- I prefer not to respond

**If you answered 'Other' in the previous question, please describe the place where you are located now below.**

**Which input device are you using now? (required)**

- Laptop keyboard
- Desktop keyboard
- Tablet on-screen keyboard
- Mobile phone on-screen keyboard
- Other
- I prefer not to respond

**If you answered 'Other' in the previous question, please describe your input device below.**

**At which age did you obtain your first license for driving a car or motorcycle?**

**What is your primary mode of transportation? (required)**

- Private vehicle
- Public transportation
- Motorcycle
- Walking/Cycling
- Other
- I prefer not to respond

**What is your knowledge of English? (required)**

- No proficiency
- Limited working proficiency
- Professional working proficiency
- Full professional proficiency
- Native or bilingual proficiency
- I prefer not to respond

**What is your knowledge of Spanish? (required)**

- No proficiency
- Limited working proficiency
-

Professional working proficiency

Full professional proficiency

Native or bilingual proficiency

I prefer not to respond

**On average, how often did you drive a vehicle in the last 12 months? (required)**

- Every day
- 4 to 6 days a week
- 1 to 3 days a week
- Once a month to once a week
- Less than once a month
- Never
- I prefer not to respond

**About how many kilometers (miles) did you drive in the last 12 months? (required)**

- 0 km / mi
- 1 - 1,000 km (1 - 621 mi)
- 1,001 - 5,000 km (622 - 3,107 mi)
- 5,001 - 15,000 km (3,108 - 9,321 mi)
- 15,001 - 20,000 km (9,322 - 12,427 mi)
- 20,001 - 25,000 km (12,428 - 15,534 mi)
- 25,001 - 35,000 km (15,535 - 21,748 mi)
- 35,001 - 50,000 km (21,749 - 31,069 mi)
- 50,001 - 100,000 km (31,070 - 62,137 mi)
- More than 100,000 km (more than 62,137 mi)
- I prefer not to respond

**How many accidents were you involved in when driving a car in the last 3 years? (please include all accidents, regardless of how they were caused, how slight they were, or where they happened) (required)**

- 0
- 1
- 2
- 3
- 4
- 5
- More than 5
- I prefer not to respond

**How often do you do the following?: Becoming angered by a particular type of driver, and indicate your hostility by whatever means you can. (required)**

- 0 times per month
- 1 to 3 times per month

- 4 to 6 times per month
- 7 to 9 times per month
- 10 or more times per month
- I prefer not to respond

**How often do you do the following?: Disregarding the speed limit on a motorway. (required)**

- 0 times per month
- 1 to 3 times per month
- 4 to 6 times per month
- 7 to 9 times per month
- 10 or more times per month
- I prefer not to respond

**How often do you do the following?: Disregarding the speed limit on a residential road. (required)**

- 0 times per month
- 1 to 3 times per month
- 4 to 6 times per month
- 7 to 9 times per month
- 10 or more times per month
- I prefer not to respond

**How often do you do the following?: Driving so close to the car in front that it would be difficult to stop in an emergency. (required)**

- 0 times per month
- 1 to 3 times per month
- 4 to 6 times per month
- 7 to 9 times per month
- 10 or more times per month
- I prefer not to respond

**How often do you do the following?: Racing away from traffic lights with the intention of beating the driver next to you. (required)**

- 0 times per month
- 1 to 3 times per month
- 4 to 6 times per month
- 7 to 9 times per month
- 10 or more times per month
- I prefer not to respond

**How often do you do the following?: Sounding your horn to indicate your annoyance with another road user. (required)**

- 0 times per month
- 1 to 3 times per month
- 4 to 6 times per month
- 7 to 9 times per month

- 10 or more times per month
- I prefer not to respond

**How often do you do the following?: Using a mobile phone without a hands free kit. (required)**

- 0 times per month
- 1 to 3 times per month
- 4 to 6 times per month
- 7 to 9 times per month
- 10 or more times per month
- I prefer not to respond

**For the questions below, please choose the best option to complete the conversation**

**Can I park here? (required)**

- Sorry, I did that.
- It's the same place.
- Only for half an hour.

**What colour will you paint the children's bedroom? (required)**

- I hope it was right.
- We can't decide.
- It wasn't very difficult.

**I can't understand this email. (required)**

- Would you like some help?
- Don't you know?
- I suppose you can.

**I'd like two tickets for tomorrow night. (required)**

- How much did you pay?
- Afternoon and evening.
- I'll just check for you.

**Shall we go to the gym now? (required)**

- I'm too tired.
- It's very good.
- Not at all.

**Experiment to measure clarity of textual external Human Machine Interfaces for automated vehicles** In this experiment, you will see multiple images of a vehicle with a textual message on a display on the front bumper. You will be asked to leave Appen to participate in the experiment. You will need to open the link below. Do not close this tab. At the end of the experiment, you will be given a code to input in the next question on this tab. Please take a note of the code. Without the code, you will not be able to receive money for your participation. All images will be downloaded before the start of the experiment. It may take a few minutes. Please do not close your browser during that time.

Open this link (<https://text-crowdsourced.herokuapp.com>) to start the experiment.

Type the code that you received at the end of the experiment. (required)

Miscellaneous questions

In which year do you think that most cars will be able to drive fully automatically in your country of residence? (required)

Please provide any suggestions that could help engineers to build safe and enjoyable automated cars.

Test Validators