

Information for Participants

Welcome to this research experiment! Thank you for your interest in this study. In this study, we are investigating the collaboration between humans and robots in a logistics environment.

Name of the Study: Human-Robot Collaboration in the Logistics Sector

Procedure

In this study, you will work on a logistics task together with the robot “Laro,” which is being tested for industrial applications. You do not need any prior experience, as you will first receive instructions and then have the opportunity to ask questions. You will also be able to test the task once before starting the actual task. Afterward, we will ask you to fill out a few questionnaires. The entire experiment will take around 45 minutes.

Your task is to hand over 40 objects, which are to be packed into 5 boxes, to “Laro.” In an industrial context, human assistance is required because the objects to be packed are visually indistinguishable to the robot, but not to humans. In this test scenario, we use labeled balls. The balls must be handed over according to the packing instructions. You can start a handover by pressing the “Left”/“Right” button corresponding to the tray in which the ball is located. Once you think the robot is ready, you can place the ball in the robot's hand. Please confirm the placement by pressing the “Done” button. If the object fell while being handed over to the robot, press the “Error” button instead. If you accidentally pressed ‘Done’/“Error,” inform the experimenter and continue the experiment. Do not retrieve or return any balls. Once the robot is ready, you can initiate the next handover by pressing the “Left”/“Right” buttons. The task is complete once both compartments are empty. Please complete the task as quickly and accurately as possible. We will measure how long it takes you to complete the task correctly. You can test this task in a demonstration round. The measured task begins after the demonstration round.

No data will be collected that would allow any clear conclusions to be drawn about your identity. A camera will track your actions, but will not record any videos during the experiment.

If you have any questions, please contact the experiment supervisor(s).

Voluntary Participation and Anonymity

Participation in the study is voluntary. You can withdraw from this study at any time without giving a reason. You will still receive the compensation even if you withdraw.

The data collected as part of this study and the personal communications described above will be treated confidentially. Project staff who have access to personal data through direct contact with you are subject to confidentiality obligations. The results of

the study will be published in anonymized form, i.e., without your data being traceable to you personally.

Possible Risks

Collision with the robot may result in injury. Therefore, please remain seated at your place while working on the task, as this ensures a safe distance. In addition, please do not touch the robot's joints.

Data Protection

Creation of a personal code: The collection of your personal data described above is completely anonymous, i.e., your name will not be asked at any point. Your answers and results will be stored under a personal code word (personal code) that you will create. This means that no one can link your data to your name. The anonymized data will be stored for at least 10 years.

You can request the deletion of the data collected from you within four weeks of completing the study. To do so, you do not need to disclose your name to us (lukas.mueller@campus.tu-berlin.de, j.perez-osorio@tu-berlin.de), only your personal code. To create your code word, you will receive the instructions “Creating your Personal-Code”. This sheet will remain with you. Please keep it in a safe place in case you wish to exercise your four-week right to withdraw your data.

The anonymized data is uploaded and stored on the Local Server platform to ensure good scientific practice. It is not possible to identify you from the data, as it is completely anonymized.

Compensation

For participating in the study, you will receive compensation in the amount of 0.5 VP per half hour started via SONA.

Financial compensation is not possible.

Consent Form

I hereby give my consent to participate in the study:

> Human-Robot Collaboration in the Logistics Sector <

The aim of the study is to investigate the collaboration between humans and robots in a logistics environment.

I agree that the data collected (results of the task and questionnaires) may be stored in anonymized form and evaluated for scientific purposes (cf. Art. 89 GDPR). Personal data, such as this declaration of consent, will be treated as strictly confidential and stored separately from each other. The transfer of personal data to third parties is excluded.

My participation in the study is voluntary, so I can withdraw from the study at any time without giving a reason. I understand that in this case, I am entitled to 0.5 VP for each half hour started. I can also request that my data be deleted retrospectively. To do so, I must contact the contact persons listed above within four weeks.

I agree that my anonymized data is uploaded and stored on a Local Server platform for at least 10 years to ensure good scientific practice. It may be reused for research purposes and published.

I have read and understood all of the participant information. I also had the opportunity to ask questions, and they were answered to my satisfaction.

Place and Date

Signature Participant