Research Participant Information Sheet

Efficacy of Metacognitive Skills Training for Collaborative Intelligence (CINTEL)

Project overview

You are invited to take part in a research study about the efficacy of AI literacy, critical thinking, and metacognitive skills for working with Artificial Intelligence. The study is being carried out by researchers from the Humans & Machines group in Data61. The study is funded by CSIRO. The purpose of this project is to identify skillsets that support effective human-AI collaboration. Findings from the study will help guide future interventions to train experts within CSIRO and workers more generally.

What does participation involve?

Participation in this study will involve taking part in a training session during the outreach activity, which will last approximately 2 hours. The goals of the entire outreach activity align with our research objectives, with the addition of pre- and post-session survey questionnaires as an extra component. The training intervention will cover AI literacy, as well as introductory Python and API concepts, and will guide you in the use of AI Literacy or metacognitive skills while working with ChatGPT for data analysis tasks. There will be time allocated for discussion throughout the session. There will be a questionnaire to measure your AI literacy, and metacognitive abilities before and after the intervention, taking approximately 10 minutes to complete. We will also collect the input to the metacognitive prompts and the prompts entered into ChatGPT for analysis purposes.

Additionally, we will ask you to complete a few short questionnaires. This information will remain anonymous.

Risks and benefits

Aside from giving up your time, there are no foreseeable risks associated with participating in this study. Following the study, we will make available a summary of the main findings. It is expected that participation in this project may benefit you directly by instilling greater awareness of your thinking process than is currently present. Additionally, your participation will increase our understanding of how to develop human skills for effective human-AI collaboration in the science domain.

Withdrawal from the research project

Participation in this study is completely voluntary and you do not have to take part. Your decision whether to participate will not affect your current or future relationship with the researchers or anyone else at CSIRO. If any topic is raised during the interview that you prefer not to discuss, you only need to tell the experimenter and the topic will not be pursued. Similarly, you are free to stop the training process at any time. In this case, any information you have provided will not be included in the study results. If you wish to withdraw after the training has finished, simply notify the researchers listed below and your data will be destroyed. You may withdraw from this study at any time up until publication of the final outputs.

Confidentiality

All information provided by you will be treated confidentially. Your name, workplace or any other personal information will not be included in any publications resulting from the study. All data collected in this study will be reported in such a way that responses will not be able to be linked to any individuals. Although data may be analysed by a researcher, it will only be available to our research team. De-identified, non-sensitive data collected by the project may be shared with other researchers for the purposes of verifying published results or advancing other research on this topic. Any data collected as part of this study will be securely stored as per CSIRO's Recordkeeping Procedure.

How will my information be used?

It is anticipated that the data obtained through the training intervention will be analysed and interpreted to be published and/or presented in a variety of forums. This includes the production of a general report on human skills to enable human-AI collaboration as well as scientific journal publications and conference presentations. De-identified information collected through the intervention may also be shared with other researchers for the purposes of verifying published results or future research. Sharing of this information may include putting it in data repositories where anyone can easily access it internally within CSIRO. We will ensure this information cannot be linked to you before it is published or shared.

Ethics clearance and contacts

This study has been approved by CSIRO's Social Science Human Research Ethics Committee in accordance with the National Statement on Ethical Conduct in Human Research 2007 (Updated 2018). If you have any questions concerning your participation in the study please contact the researchers via Dr Sidra Sidra (contact details provided below). Alternatively, any concerns or complaints about the conduct of this study can be raised with the Executive Manager of Social Responsibility and Ethics on +61 7 3833 5693 or by email at csshrec@csiro.au.

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Thank you for taking the time to help with this research project. Please keep this sheet for your information.