

RQ1: Short-term effects of human feedback on engagement

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This file is meant to allow you to reproduce our analyses for our first research question. This includes reproducing:

- The results regarding the direct effect of human feedback,
- The results regarding the delayed effect of human feedback,
- The results regarding the delayed effect of multiple feedback messages, and
- The effort spent on activities in two previous studies without the chance of receiving human feedback and the effort spent on in-common activities in our study by people who never received feedback.

Examine Results as Computed by Us

To examine the output of the analyses obtained by us, refer to the files:

- `direct_effect.pdf` for the direct effect of human feedback,
- `delayed_effect_single.pdf` for the delayed effect of human feedback,
- `delayed_effect_multiple.pdf` for the effect of multiple feedback messages, and
- `effort_comp_across_studies_effort_with_hdi.pdf` for the effort spent on activities in different studies.

Reproduce Analyses Yourself

This section is to explain how you can run the analyses yourself.

Requirements

You need to have Docker installed.

Steps to Reproduce Analyses

The reproduction of our code is based on Docker and R Studio. Take the following steps:

1. Make sure you have Docker installed. You can check if you do by running `docker -v`.
2. Navigate to the folder this README-file is in.
3. Now you have 2 options:
 - Build the Docker image via `docker build . -t gbna4/humaninv2024_r`, or
 - Pull the Docker image from Dockerhub via `docker pull gbna4/humaninv2024_r`.
4. Run the Docker container via `docker run -d -p 8787:8787 -v <path_to_this_directory>:/home/rstudio/analysis -e PASSWORD=<some_password> gbna4/humaninv2024_r`.
5. Go to `localhost:8787`.
6. Login with username 'rstudio' and the password chosen in step 4.
7. Navigate to the "analysis"-folder in R Studio.
8. Now you can reproduce the analysis results using one of the .Rmd-files mentioned earlier.

Knitting R Markdown

If you just want to knit an analysis file to a pdf-file, take the following steps:

1. Make sure you have Docker installed.
2. Navigate to the folder this README-file is in.
3. Now you have 2 options:
 - Build the Docker image via `docker build . -t gbna4/humaninv2024_r`.
 - Pull the Docker image from Dockerhub via `docker pull gbna4/humaninv2024_r`.
4. Run an interactive session with the Docker container via `docker run -it -v <path_to_directory_of_this_README_file>:/home/rstudio/analysis gbna4/humaninv2024_r /bin/bash`.
5. In the interactive session, type `cd /home/rstudio/analysis` to navigate to the analysis-folder.
6. Start an R session via `R`.
7. Import rmarkdown via `library('rmarkdown')`.
8. Knit an R markdown file via `render("<analysis_file>.Rmd", output_file = "<desired_output_file_name>.pdf")`.

Explanation of Folders and Files

This directory contains the following files and folders:

- Data:
 - `data_rl_samples.csv`: Transition samples from this study.
 - `effort_for_study_comparison_onlyneverfeedback_study2`: Effort spent on activities in this study and two previous studies, using only the data on in-common activities and those people in this study who never received human feedback.
- `delayed_effect_multiple.pdf`: Analysis of the delayed effect of multiple human feedback messages.
- `delayed_effect_multiple.Rmd`: .Rmd-file to reproduce the analysis above.
- `delayed_effect_single.pdf`: Analysis of the delayed effect of human feedback.
- `delayed_effect_single.Rmd`: .Rmd-file to reproduce the analysis above.
- `direct_effect.pdf`: Analysis of the direct effect of human feedback.
- `direct_effect.Rmd`: .Rmd-file to reproduce the analysis above.
- `Dockerfile`: To build the Docker image yourself.
- `effort_comp_across_studies_effort_with_hdi.pdf`: Analysis of the effort spent in different studies.
- `effort_comp_across_studies_effort_with_hdi.Rmd`: .Rmd-file to reproduce the analysis above.
- `README.md/README.pdf`: This Readme-file.