AQ2: Changing Usefulness Beliefs

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This file is meant to allow you to reproduce our analysis for our second analysis question on changing usefulness beliefs. This includes reproducing:

- The results from the paired Bayesian t-tests from Table 5.2 in the chapter.
- The Cohen's d values from the chapter.

Examine Results as Computed by Us

To examine the output of the analyses obtained by us, refer to the file "analysis_persuasive_activities.pdf."

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 analyses 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/usefulness2024_bayesian_first_aid`, or
   - Pull the Docker image from Dockerhub via `docker pull gbna4/usefulness2024_bayesian_first_aid`.
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/usefulness2024_bayesian_first_aid`.
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 the file "analysis_persuasive_activities.Rmd."

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/usefulness2024_bayesian_first_aid`.

- Pull the Docker image from Dockerhub via `docker pull gbna4/usefulness2024_bayesian_first_aid` .

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/usefulness2024_bayesian_first_aid /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_binary.csv: preprocessed RL-samples gathered in our crowdsourcing study.

- analysis_persuasive_activities.pdf: file that shows the results we obtained for the paired Bayesian t-tests and Cohen's d computations.
- analysis_persuasive_activities.Rmd: file to allow you to reproduce the results from the file above.
- Dockerfile: file to allow you to build the Docker image yourself.
- JAGS-4.3.0.tar.gz: needed for building the Docker image yourself.
- README.md/README.pdf: this README-file.