

Setting Physical Activity Goals with a Virtual Coach: Vicarious Experiences, Personalization and Acceptance

Participant Characteristics as well as Cohen's Kappa and Code Frequencies for Qualitative Analysis

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This file is meant to guide you through the steps needed to reproduce our participant characteristics from Table 2 and the characteristics of the example people from Table 4 in the Appendix, as well as the Cohen's Kappa value reported for the qualitative analysis in the "Data Preparation and Analysis Strategies"-section. We also reproduce the figure that shows the code frequencies per condition (Figure 6).

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Requirements

You need to have Docker installed.

In addition, you need to download data from this link on 4TU.ResearchData: <https://doi.org/10.4121/20047328.v1>. Copy the files "thematic_analysis/coder1.csv" and "thematic_analysis/coder2.csv" into the "Data"-folder in the directory that this README-file is in.

Steps to Reproduce Analysis

The reproduction of our results is based on Docker and Jupyter Notebook. Take the following steps:

1. Make sure that you have Docker installed. You can check whether you do by running `docker -v`.
2. Now choose from the following two options:
 - In the directory of this README-file, build the Docker image via `docker build . -t gbna4/goals_model_python`.
 - In the directory of this README-file, pull the Docker image from Dockerhub via `docker pull gbna4/goals_model_python`. Note that this is the same Docker image as for the Python code for the prediction model.
3. Run the Docker container via `docker run -p 8888:8888 -e JUPYTER_ENABLE_LAB=yes -v <this_working_directory>:/home/jovyan/work gbna4/goals_model_python`, where `<this_working_directory>` is the path to the directory that this README-file is in.
4. Go to one of the links presented in the terminal upon running the Docker container to access Jupyter Notebook.
5. Open the "work"-folder in Jupyter Notebook. If the "work"-folder is empty, check that you have used the correct path in the command for running the Docker container. Also, sharing the folder content may not work if you use a drive other than the C drive.

6. Use the workbook "participant_characteristics_main_study.ipynb" to reproduce our participant characteristics from Table 2.
7. Use the workbook "participant_characteristics_example_people.ipynb" to reproduce our characteristics of the example people from Table 4 in the Appendix.
8. Use the workbook "qualitative_analysis.ipynb" to reproduce the Cohen's kappa value from the "Data Preparation and Analysis Strategies"-section of the paper, as well as the code frequencies from Figure 6.

Explanation of Files

This directory contains the following files and folders:

- Data: Data needed for the computations,
- Figures: Contains Figure 6 as created by us,
- Dockerfile: Dockerfile to build the Docker image yourself,
- participant_characteristics_example_people.ipynb: Workbook to reproduce our characteristics of the example people from Table 4 in the Appendix,
- participant_characteristics_main_study: Workbook to reproduce our participant characteristics from Table 2,
- qualitative_analysis.ipynb: Workbook to reproduce the Cohen's kappa value from the "Data Preparation and Analysis Strategies"-section of the paper, as well as the code frequencies from Figure 6, and
- README.md/README.pdf: This README-file.