CODECHECK certificate 2024-021

https://doi.org/10.5281/zenodo.14236507

Item	Value
Title	Using Consumer Wearables to Measure Physical Activity of Nursing Home Residents with Dementia
Authors	Daniela Gawehns, Suzanne Portegijs, Adriana Petronella, Anna van Beek, Matthijs van Leeuwen
Reference	https://doi.org/10.31234/osf.io/mqg86
Codechecker	Stephen J. Eglen , Daniel Nüst
Date of check	2024-11-28 14:00:00
Summary	Downloaded the aggregate data and ran R script to reproduce figures.
Repository	https://github.com/hanneoberman/DementiaPhysicalActivity

Table 1: CODECHECK summary

Output	Comment	Size (b)
`BoxplotallCatsMedloPercent.pdf`	manuscript Figure 1	5380
`BoxplotallCatsSamsungPercent.pdf`	manuscript Figure 2	5334
`CorrelationMatrix_5sec_hc.tif`	manuscript Figure 3	13230192

Table 2: Summary of output files generated

Summary

The repository could be downloaded from GitHub and the `PlottingScripts.R` file contained all code required to produce the three figures in the paper. There were some initial issues with the raw data files not being available. One of the authors of the paper (Daniela Gawehns) provided aggregate data, and edited the R script to remove any code dependent on the raw data. With the aggregate data and edited script, we were able to create a version of all three figures present in the paper on three different Windows machines. The third figure contained the same statistics, but a different layout than the figure present in the paper. This is because the author updated the design of this figure for the paper that is currently in press, but has not updated the ArXiv version of the paper.

CODECHECKER notes

Code was written in `R`. Running the current version of the R script `PlottingScripts.R` yields all necessary output files. This took 1 minute to complete on a Windows 10 laptop.

Recommendations

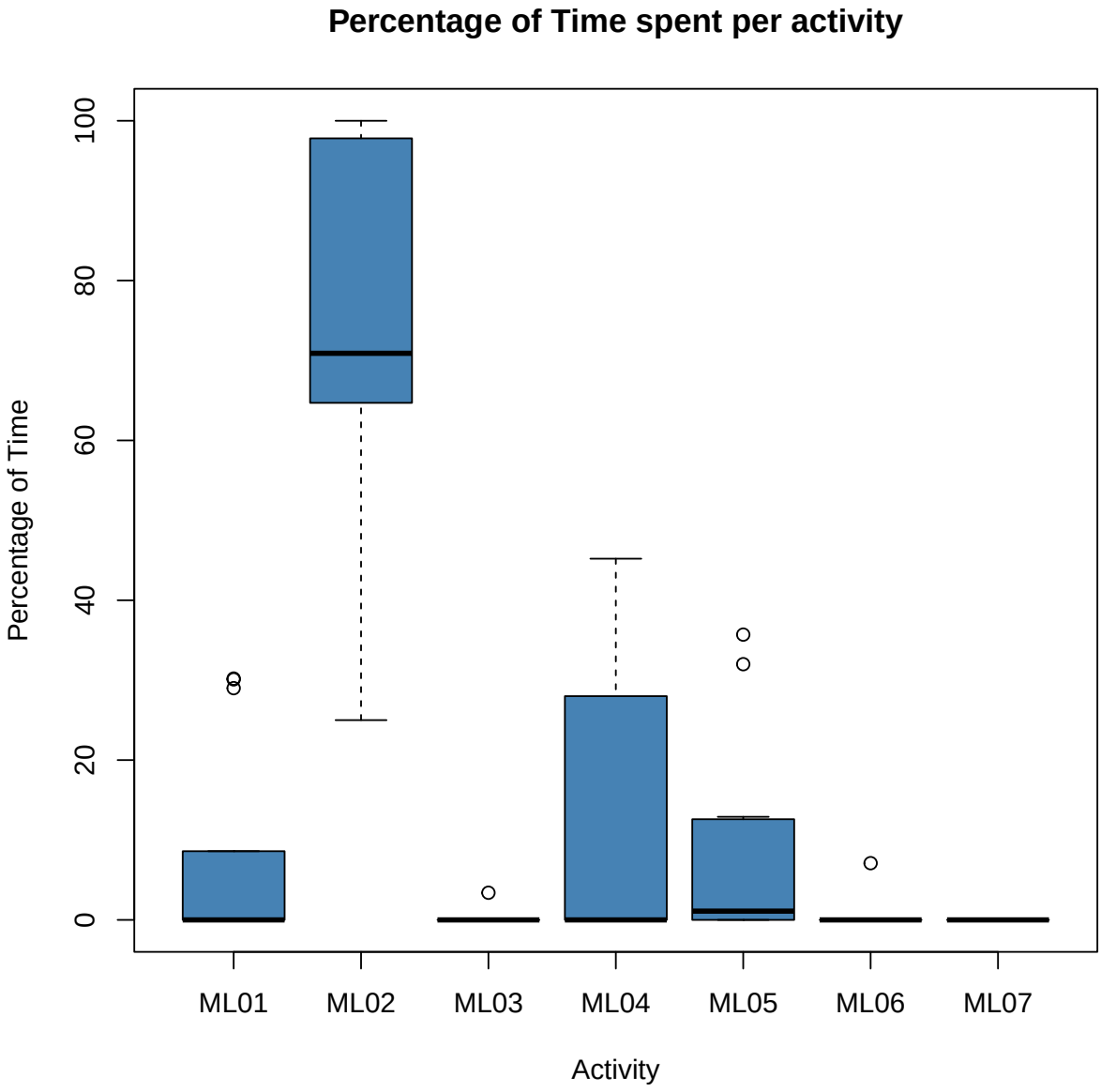
We suggest to the authors to consider the following suggestions for their next publication or workflow:

- make sure to include all necessary files in the repository upon submission, including aggregate data files
- use a folder structure to separate 'read only' files (such as data) from scripts (such as data pre-processing) and 'write' files (such as output files)
- further organize the GitHub repository (e.g. use `main` as the default branch, add a license, add a step-bystep reproduction guide in the README file)

Manifest files

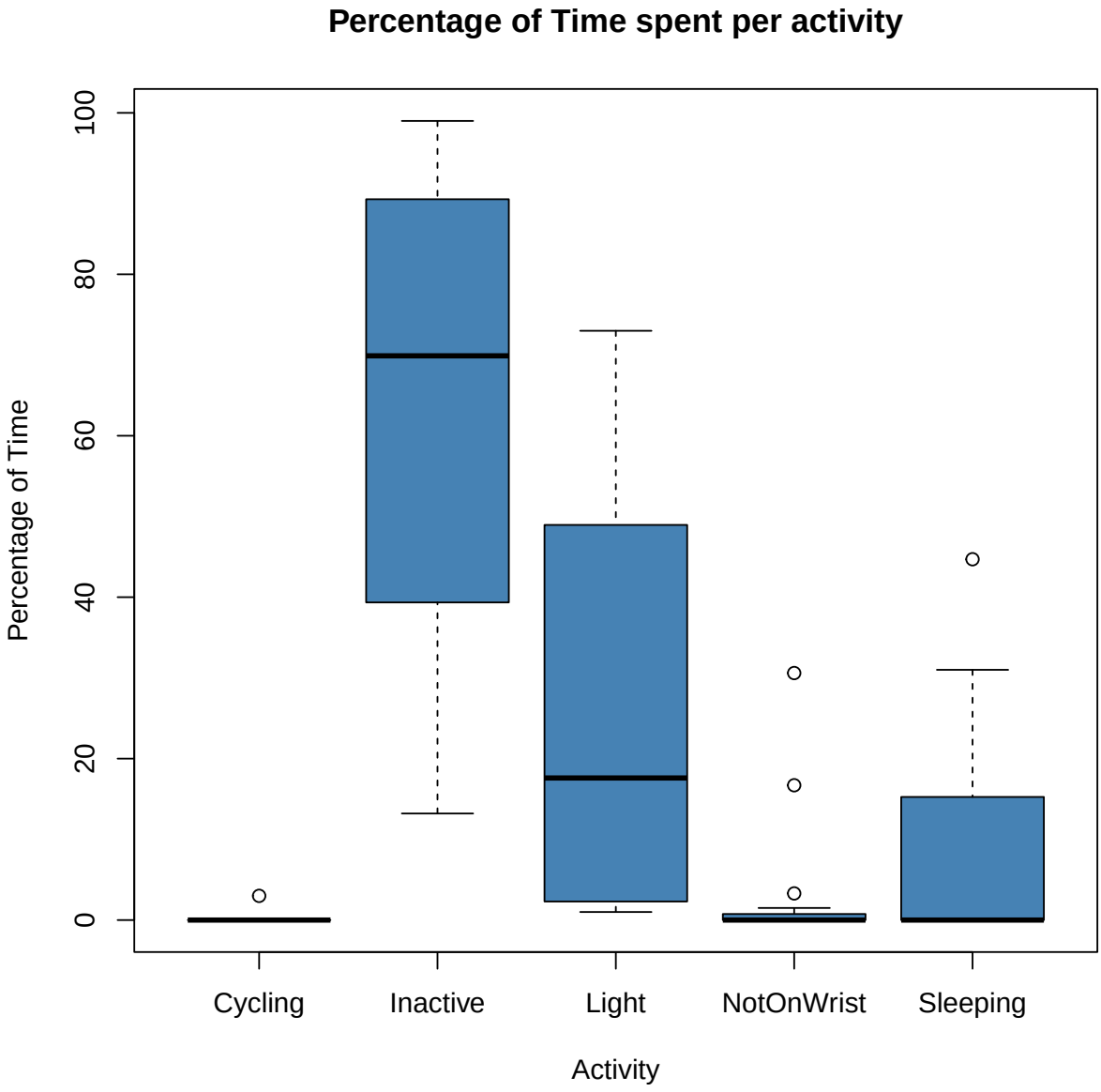
BoxplotallCatsMedloPercent.pdf

Comment: manuscript Figure 1



BoxplotallCatsSamsungPercent.pdf

Comment: manuscript Figure 2



CorrelationMatrix_5sec_hc.tif

Cannot inlcude output file as figure.

Acknowledgements

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Citing this document

Stephen J. Eglen, Daniel Nüst (2024). CODECHECK Certificate 2024-021. Zenodo. https://doi.org/10.5281/zenodo.14236507

About CODECHECK

This certificate confirms that the codechecker could independently reproduce the results of a computational analysis given the data and code from a third party. A CODECHECK does not check whether the original computation analysis is correct. However, as all materials required for the reproduction are freely available by following the links in this document, the reader can then study for themselves the code and data.

About this document

This document was created using R Markdown using the `codecheck` R package. `make codecheck.pdf` will regenerate the report file.

```
sessionInfo()
```

```
## R version 4.4.2 (2024-10-31 ucrt)
## Platform: x86_64-w64-mingw32/x64
## Running under: Windows 10 x64 (build 19045)
##
## Matrix products: default
##
##
## locale:
## [1] LC_COLLATE=Dutch_Netherlands.utf8
## [2] LC_CTYPE=Dutch_Netherlands.utf8
## [3] LC_MONETARY=Dutch_Netherlands.utf8
## [4] LC_NUMERIC=C
## [5] LC_TIME=Dutch_Netherlands.utf8
##
## time zone: Europe/Amsterdam
## tzcode source: internal
##
## attached base packages:
## [1] stats     graphics  grDevices utils     datasets
## [6] methods   base
##
## other attached packages:
##  [1] readr_2.1.5      tibble_3.2.1     xtable_1.8-4
##  [4] yaml_2.3.8       rprojroot_2.0.4  knitr_1.49
##  [7] codecheck_0.11.4 parsedate_1.3.1  R.cache_0.16.0
```

```
## [10] gh_1.4.0
##
## loaded via a namespace (and not attached):
##  [1] xfun_0.49         rdflib_0.2.9      tzdb_0.4.0
##  [4] vctrs_0.6.5       tools_4.4.2       generics_0.1.3
##  [7] parallel_4.4.2    curl_5.2.1        fansi_1.0.5
## [10] pkgconfig_2.0.3   pdftools_3.4.1    R.oo_1.25.0
## [13] redland_1.0.17-18 assertthat_0.2.1  lifecycle_1.0.4
## [16] compiler_4.4.2    atom4R_0.3-3      stringr_1.5.1
## [19] keyring_1.3.2     htmltools_0.5.7   pillar_1.9.0
## [22] crayon_1.5.3      whisker_0.4.1     tidyr_1.3.1
## [25] R.utils_2.12.3    cachem_1.0.8      zen4R_0.10
## [28] tidyselect_1.2.1  zip_2.3.1         digest_0.6.31
## [31] stringi_1.7.12    dplyr_1.1.4       purrr_1.0.1
## [34] fastmap_1.1.1     archive_1.1.7     cli_3.6.1
## [37] magrittr_2.0.3    XML_3.99-0.16     crul_1.4.2
## [40] utf8_1.2.4        osfr_0.2.9        withr_3.0.2
## [43] bit64_4.0.5       roxygen2_7.3.2    rmarkdown_2.29
## [46] httr_1.4.7        bit_4.0.5         qpdf_1.3.4
## [49] askpass_1.2.1     R.methodsS3_1.8.2 hms_1.1.3
## [52] memoise_2.0.1     evaluate_1.0.1    rlang_1.1.1
## [55] Rcpp_1.0.10       glue_1.6.2        httpcode_0.3.0
## [58] xml2_1.3.5        fauxpas_0.5.2     rorcid_0.7.0
## [61] rstudioapi_0.17.1 vroom_1.6.5       jsonlite_1.8.8
## [64] plyr_1.8.9        R6_2.5.1          fs_1.6.2
```