

CODECHECK certificate 2025-01 for Multiproxy analysis exploring patterns of diet and disease in dental calculus and skeletal remains from a 19th century Dutch population



Item	Value
Title	Multiproxy analysis exploring patterns of diet and disease in dental calculus and skeletal remains from a 19th century Dutch population
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Ref. paper	https://doi.org/10.24072/pcjournal.414
Codechecker	Aleksandra Wilczynska, https://orcid.org/0000-0001-9323-0267 , Daniela Gawehns, https://orcid.org/0000-0002-9678-9012
Date of Check	2025-02-14
Summary	The Codecheck resulted in full reproduction. Once we had the prerequisites installed, we followed the instructions to restore the needed dependencies (i.e. packages). Finally, we managed to reproduce the entire paper with a single quarto command. The paper is written in Quarto - open-source publishing system that combines text (markdown) and code (in this case

	R). The results were rendered to a pdf. The figures and statistics generated by compiling the document match the ones from the submission.
Repository	https://github.com/alwil/mb11CalculusPilot
Ref. certificate	10.5281/zenodo.15389126

Table 1: CODECHECK summary

Output	Comment
https://github.com/alwil/mb11CalculusPilot/blob/main/analysis/paper/_output/version_of_record.pdf	Link to the reproduced paper in pdf

Table 2: Summary of output files generated

Summary

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CODECHECKER notes

- The CODECHECK was performed on:
 - o Windows 11, RStudio 2024.04.0, R 4.4.0
 - o Windows 10, RStudio R 2023.12.1, R 4.3.3
- There was a typo in the link to download repository (fixed now)
- `renv()` produced problems due to R version incompatibility
 - o solution: install `devtools` -> `devtools::install()` as there is a `DESCRIPTION` file in the repository dependencies can be read from
- `ggcorrplot()` not in the `DESCRIPTION` file
- `kableExtra()` not in the `DESCRIPTION` file
- Error associated with a missing LaTeX file `tabu.sty`
 - o solution: installed packages on MikTeX Console and run the code without the pdf input argument: `quarto::quarto_render("analysis/paper/paper.qmd")`
- paper replicated (there are some small differences in layout)

Installation prerequisites and computational environment

This is well documented in the README file: <https://github.com/alwil/mb11CalculusPilot>

Software requirements:

- [R](#)
- [Quarto](#)
- [TeX](#)
- [Git](#) (optional)

Linux dependencies:

```
libx11-dev libicu-dev make zlib1g-dev libcurl4-openssl-dev libssl-dev libfontconfig1-dev  
libfreetype6-dev libfribidi-dev libharfbuzz-dev libjpeg-dev libpng-dev libtiff-dev pandoc  
libxml2-dev libgit2-dev gfortran
```

You can download the compendium as a zip from from this URL:

- [main.zip](#).

or clone the repository:

- `git clone https://github.com/bbartholdy/mb11CalculusPilot.git`

Then:

1. open the folder in your preferred IDE
2. `run renv::restore()` to install the required R packages

Running the code

1. `run quarto::quarto_render("analysis/paper/paper.qmd", output_format = "html")` in the R console (requires installing **quarto** R package) or `quarto render analysis/paper/paper.qmd --to html` to produce an HTML

Outputs

To see the output, we needed to navigate to `/analysis/paper/_output/version-of-record.html` in a browser ([see replicated version here](#)).

Acknowledgements

We would like to thank Bjørn for sharing his research and allowing us to check its reproducibility.

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