WARD BERND EILING

Bilthoven, Utrecht, the Netherlands & w.b.eiling@uu.nl & linkedin.com/in/wardeiling

Personal Profile -

Driven Research Master's student in Methodology and Statistics at Utrecht University with a strong academic foundation in communication (writing and presenting), programming, data visualization, and statistical modeling. Aspiring to pursue a PhD to contribute to research on causal discovery, Bayesian statistics, dimension reduction, and ideographic time-series analysis of momentary symptom dynamics.

Education -

Utrecht University

Research Master, Methodology and Statistics (English)

First-year GPA: 8.7/10.0

Sep. 2023 - May 2025 (Expected)

University of Groningen

Honours College (extra programme of 45 ECTS; English)

May 2021 – July 2023 GPA: 7.5/10.0

University of Groningen

Bachelor of Science, Psychology (English)

Sep. 2020 – Aug. 2023 *Graduated Cum Laude GPA: 8.7/10.0*

Research Experience –

Utrecht University, Master Thesis Project

 \hookrightarrow Prof. Ellen Hamaker & Dr. Jeroen Mulder

Sep 2024 – present

- Investigated bias in treatment effect estimation in multilevel linear models with randomized treatment and timevarying endogenous covariates by performing large-scale simulations (parallelized in R) and creating causal graphs.
- Managed reproducible research compendium on GitHub.
- Presented preliminary findings and wrote intermediary research report independently.

University of Groningen Research Intern

Oct. 2022 - July 2023

 \hookrightarrow Dr. Sebastiaan Mathôt & MSc Veera Ruuskanen

- Investigated state-dependent pupil dilation and feature selectivity in an experimental study.
- Drafted Ethics Committee proposals, conducted laboratory data collection and calibrated eye trackers.
- Computed perceptual sensitivity and analyzed data using regression, ANOVA, and ROC curves in R.

University of Groningen, Bachelor Thesis Project

Sep. 2022 – July 2023

 \hookrightarrow Dr. Laura Bringmann & Prof. Casper Albers

15 ECTS Grade: 9/16

- Investigated model misspecification in VAR(1) models (related to non-stationarity) by performing a simulation study and empirical analysis in R, comparing cross-validation techniques and predictive accuracy metrics (e.g., MSPE, Mahalanobis distance).
- Collaborated with a research master's student and presented findings through an oral presentation and final report.

University of Groningen Research Intern

Sep. 2021 – Aug. 2022

 \hookrightarrow Dr. Brian D. Ostafin

- Explored the relationship between awe induction and perceived meaning in life in collaboration with fellow students.
- Designed a Qualtrics survey and conducted data collection.
- Analyzed data using ANOVA, planned comparisons, and moderation analyses in SPSS.
- Delivered the methods and results of a research report and presented the findings to an audience.

Work Experience -

Utrecht University, Society in the Loop Project Research Assistant (8 hours/week)

Oct. 2024 – **present**

- Explored available open data and created data visualizations to support stakeholder conversations.
- Identified underrepresented groups or facilities within data sets.
- Explored 3D mapping tools (e.g., Netherlands3D) for digital twin applications.

Utrecht University, Advanced course on using Mplus Teaching Assistant

Aug. 2024

 \hookrightarrow Prof. Ellen Hamaker $\operatorname{\mathscr{E}}$ dr. Jeroen Mulder

• Assisted in the teaching of the Summer School course S23 Advanced Course on Using Mplus, covering topics such as longitudinal mixture modeling, causal inference in cross-lagged panel research, and dynamic structural equation modeling (DSEM).

Utrecht University, Introduction to Research Methods Teaching Assistant (6 hours/week) Sep. 2023 - Nov. 2023

Actively taught research methods to two practical groups consisting of more than 20 Bachelor's students.

University of Groningen, Educational Institutional Research Assistant (12 hours/week) Sep. 2022 -

- Improved Qualtrics surveys regarding the state of education (for students and teachers) in different faculties.
- Preprocessed data with SPSS syntax and made factsheets with advanced Microsoft Excel formula syntax.

University of Groningen, Statistics 2 Teaching Assistant (10 hours/week)

Aug. 2022 - Jan. 2023

- Supervised/taught two practical groups of about 15 students each.
- Assisted students with manual calculations and software exercises (JASP/SPSS) pertaining to varying types of regression (e.g., simple linear, multiple, logistic) and ANOVA.

Team050 Ambulatory Attendant (6 hours/week)

Mar. 2022 - Dec. 2022

- Provided emotional and practical support to children, helping alleviate parental burdens.
- Motivated clients to engage in educational activities and guided clients with planning and structure, resulting in the improvement of grades.
- Enhanced clients' sense of self by providing emotional support.

Awards -

Judicium Cum Laude Graduated with the judicium Cum Laude for the Bachelor of Psychology.

2023

Best in Class, Data Visualization

2021

Awarded (a book) for creating the best Tableau-based data visualization dashboard in the "Analyzing Data" course.

Projects & Extracurricular Courses

Non-Stationarity and Model Selection Researcher

June 2024 - present

- → M.Sc. Yong Zhang, Dr. Anja Ernst, Dr. Ginette Lafit, Dr. Laura Bringmann
- Co-authored a manuscript (under submission) for the British Journal of Mathematical and Statistical Psychology, focusing on in-sample and out-of-sample model selection techniques for non-stationary autoregressive (AR) models.
- Evaluated non-stationary AR models (e.g., time-varying, hidden Markov, regime-switching, threshold) using information criteria (AIC, AICc, HQ, BIC) and cross-validation errors on empirical psychopathological dataset.
- Designed and conducted a systematic review on ecological momentary assessment studies using Rayyan.

University of Groningen A gentle introduction to deep learning

• Explored topics in 1) machine learning and neural networks; 2) gradient descent, vanishing gradients, training networks; 3) convolutional neural networks and variants; and 4) how to use transformer networks.

Great Learning Academy Introduction to R

• The contents of this course pertained basics of R (e.g., basic programming, accessing packages, writing functions).

Technical Skills -

R, Python & MATLAB. **Programming Languages**

Markup Languages Markdown (e.g., Quarto) & LATEX.

Software Applications RStudio, GitHub, SPSS, JASP, Tableau, Zotero, ATLAS.ti, Anaconda, Mendeley,

Rayyan, Microsoft Office & Adobe Acrobat DC.

Dutch (native) \mathcal{E} English (fluent). Languages

Miscellaneous Exceptional analytical and problem solving skills, strong verbal and written

communication skills.

Selected Coursework -

M.Sc. Methodology & Statistics (grade)

B.Sc. Psychology (3rd **year)** (grade)

Bayesian Statistics (10/10)

Causal Inference and SEM (8.5/10)

Programming for Psychologists (9.5/10)

Experimental Skills (10/10)

Computational Inference with R (9/10)

Introduction to Qualitative Research Methods (8.5/10)

Fundamentals of Statistics (8.5/10) Introduction to Biomedical Statistics (8/10) Statistical Solutions to Research Problems in Psychology (9.5/10) Philosophy of Psychology (9/10)

Survey Data Analysis (9/10)

Interests -

Academic Causal discovery, Bayesian statistics, high dimensional data analysis, time-series analysis,

philosophy of science, clinical versus statistical prediction, qualitative research \mathcal{E} missing data.

Health Mindfulness, yoga, meditation, running, skiing, snowboarding, cycling, windsurfing & playing guitar.

Computers Building electronics projects at home \mathcal{E} optimizing work-flow.

Other Reading novels (e.g., Fyodor Dostoevsky) & philosophy (e.g., Alan Watts, Seneca, Marcus Aurelius).