Judith Neve, MSc

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Key skills

- Statistics and probability
- Machine learning
- Programming in R and Python
- Parallel computing
- Manipulation of large datasets
- Data visualisation and analysis

Education

2021—2023 — **Methodology and Statistics for the Behavioural, Biomedical, and Social Sciences MSc (*cum laude*)**, *Utrecht University*, Netherlands

- Followed the **Applied Data Science track**, covering data visualisation, supervised and unsupervised learning, regularisation, time series, deep learning, and natural language processing.
- **Thesis project** (conducted at the University Medical Centre): Evaluating hyperparameter tuning procedures in predictive modelling considering both model predictive performance and training time.
  - Gained insight into **machine learning** as used for predictive modelling in medicine.
  - Designed and programmed 3 complex simulation studies in **R (tidyverse, caret, ranger)**, executed via **slurm** on a high performance computer.
  - Manipulated, visualised and analysed large datasets by aggregating thousands of files, providing invaluable insights into model training.
  - Innovated in results visualisation, allowing interactive exploration via **R Shiny**.
  - Generated a report in **R Markdown (knitr, xtable)** to mitigate transcription errors in numerical data.
  - Report (soon to be submitted for publication), GitHub repository, results dashboard in R Shiny.
- **Other key projects**
  - Recommender systems algorithms programmed in **Python (pandas, numpy, seaborn, scikit-learn)**.
  - Poisonous mushroom classification algorithm programmed in **R (tidyverse, randomForest, xgboost, rpart)**. Collaborated upon using **GitHub**.
  - Gibbs sampler programmed in **R (bain)**.
  - Multiple imputation in the European Social Survey performed in **R (mice)**.

2017—2021 — **Psychology and Statistics BSc (First Class Honours)**, *University of Glasgow*, United Kingdom

- **Dissertation project**: Assessing the evolution of data sharing practices in the psychological literature.
  - Combined three different datasets on the same topic to extend previous findings.
  - Analysed the data using **generalised additive models** and **(polynomial) logistic regression**.
  - Following best practices guidelines, developed the analysis framework in **R** using simulated data prior to data collection, facilitating streamlined data and analysis.
  - Preprint (accepted for publication in *Meta-Psychology*), Open Science Framework project.

Work experience

Nov.—Dec. 2021, May—Aug. 2022, Nov.—Dec. 2022 — **Teaching Assistant**, *Department of Psychology, Utrecht University*, Netherlands

- Delivered statistics tutorials, employing clear communication to explain complex concepts and accommodate varying levels of understanding among students.
- Proactively assessed students' homework assignments prior to tutorial sessions, identifying knowledge gaps and adapting teaching materials to provide targeted support and promote clarity.
- Collaborated with a small team to create online instructional materials with interactive learning tools in **Grasple**, effectively conveying complex ideas and processes in bite-sized formats to enhance student comprehension and retention.

Oct. 2021—Apr. 2022 — **Research Assistant**, *Department of Methodology and Statistics, Utrecht University*, Netherlands

- Spearheaded the comprehensive testing and troubleshooting of the **R package CTmeta**, ensuring optimal accuracy and efficiency for its users.
- Demonstrated exceptional attention to detail in identifying and resolving errors in the code, resulting in a seamless and error-free user experience.
- Contributed to the accessibility and usability of the package by reviewing and revising its documentation, resulting in clearer instructions for users.

Oct. 2021 — **Teaching Assistant**, *Department of Computing Science, Utrecht University*, Netherlands

- Leveraged statistical expertise to identify relevant documents for each of 150 statistical queries in an AI study, supporting research and development efforts.

June—Dec. 2020	**Research internship**, *At Work Kft.*, Hungary
	○ Acquired expertise in factor analysis through leading exploratory and confirmatory factor analyses in **R** on the Hungarian translation of the Short Dark Triad questionnaire.
	○ Third author on the resulting publication, which validates the psychometric questionnaire for use.
June—Aug. 2019	**Voluntary research work**, *Department of Psychology, University of Glasgow*, United Kingdom
	○ Thoroughly cleaned a linguistic dataset, requiring close attention to detail and critical thinking to ensure the quality and integrity of the dataset.
	○ Led numerical and graphical exploratory analyses in **R (tidyverse, tidytext)**, now used in Dr. Nordmann's annual presentation on the psychology of swearing.
	○ Conducted a literature search to contextualise the results.

Community engagement

2020—2021	**Vice President Treasurer**, *Glasgow University LGBTQ+ Society*, United Kingdom
	○ Oversaw the society's financial management, identifying and correcting inconsistencies in previous reports and ensuring accurate record-keeping.
	○ Cooperated with the President and Vice President Secretary to effectively manage an 18-person committee and ensure the smooth operation of one of the largest student societies in Scotland.
	○ Coordinated efforts to maintain weekly society events and activities during the COVID-19 pandemic, positioning the society as one of the few on campus to continue providing meaningful engagement and community support for students.
	○ Listened to society members' requests and adapted strategies to meet their needs.
2019—2020	**International Officer**, *Glasgow University LGBTQ+ Society*, United Kingdom
	○ Worked cooperatively with the society committee to ensure the smooth running of the society.
	○ Organised and moderated a range of events aimed at LGBTQ+ students.
	○ Acted as a key point of contact between international students and the society committee, providing support and guidance as needed.
	○ Led fortnightly coffee meetups to provide a relaxed and welcoming environment for international students to socialise and connect with one another.

IT skills

- ○ **R**, proficient.
- ○ **LaTeX**, proficient.
- ○ **Python**, intermediate.
- ○ **SQL**, intermediate.
- ○ **Excel**, intermediate.
- ○ **JASP, SPSS**, intermediate.
- ○ **Mplus**, intermediate.
- ○ **GitHub**, intermediate.
- ○ **slurm**, basic.
- ○ **HTML, CSS**, basic.
- ○ **Tableau**, currently self-teaching.
- ○ **Power BI**, currently self-teaching.

Prizes and awards

2021	**Distinguished first class Honours**, *University of Glasgow*, United Kingdom
	Among the 25% highest performing first class honours students in Psychology.
2021	**Research Methods prize**, *University of Glasgow*, United Kingdom
	Best final year project in research methods.
2020	**SAS prize with high distinction**, *University of Glasgow*, United Kingdom
	Best performance in Year 3 of Bsc Psychology and Statistics.
2020	**Merit list Psychology level 3**, *University of Glasgow*, United Kingdom
	Figuring on the list of psychology students obtaining an A grade in academic year 2019/2020.
2018	**Merit list Psychology level 1**, *University of Glasgow*, United Kingdom
	Figuring on the list of psychology students obtaining an A grade in academic year 2017/2018.

Publications

Neve, J., & Rousselet, G. (2021). The Evolution of Data Sharing Practices in the Psychological Literature. Meta-Psychology (undergoing copyediting). https://doi.org/10.31234/osf.io/3xdja

Szabó, Z. P., Czibor, A., Neve, J., Restás, P., Hadarics, M., Szijjártó, L., Simon, E., Marót, J. L., Kun, Á., & Bereczkei, T. (2021). Development of the hungarian version of the short dark triad questionnaire (SD3-HU): Psychometric properties and validity. Current Psychology. https://doi.org/10.1007/s12144-021-02470-4