



FLORENCE BOCKTING

CONTACT

florence-bockting.github.io

LANGUAGES

German (mother language)
English (fluent)
French (intermediate)

PROGRAMMING

R, Python, TensorFlow, Stan
Markdown, Shiny, Quarto,
Jupyter Lab
HTML, CSS, JS

FURTHER SKILLS

MS Office, LaTeX
Zotero, Obsidian, Notion
Jira, Miro
Git, GitHub, GitHub Pages
Quarto, Sphinx, ReadTheDocs,
uv, pixi, pdm, hatch
HPC, Linux & Windows

EXPERIENCES

- Research scientist at Climate Resource S GmbH, Berlin
 - since March 2025
 - Working Areas: Method Development, Climate Science, and Research Software Engineering
- Consulting for Jacobs Foundation, Zürich, Switzerland
 - since August 2025
 - implement expert prior elicitation for internal decision processes
- PhD Student in the Working Group „Computational Statistics“ (Prof. Dr. Paul-Christian Bürkner)
 - since June 2023 | Computational Statistics, TU Dortmund University
 - 2022 – 2023 | SC SimTech, University of Stuttgart
- PhD Student in the Working Group „Psychological Methods & Statistics“ (Prof. Dr. Daniel W. Heck)
 - 2020 – 2022 | Psychology Department, Philipps-University of Marburg
- Tutor & student assistant
 - 2015 – 2020
 - for various lectures and seminars in Data Ethics, Statistics, Computational Data Analysis, Bayesian Data Analysis, General Psychology, Experimental Psychology
- Research assistant
 - 2018 – 2019
 - Qualitative and Quantitative Market Research in Health Care, Produkt+Markt GmbH, Osnabrück
- Project member
 - 2018
 - Development of a Matching Platform for Student Skills. | My primary responsibility was conducting a needs analysis and conceptualizing the design of the matching platform.
- Internships
 - 2017 | Qualitative Market Research in Health Care, Ipsos GmbH, Hamburg
 - 2016 | Chair of General Psychology and Methodology, Prof. Dr. Claus-Christian Carbon, University of Bamberg

EDUCATION

Master Studies in Cognitive Science

- 2018 – 2020, University of Osnabrück
- Majors: Artificial Intelligence and Cognitive Psychology
- Graduated with distinction

Bachelor Studies in Business Psychology

- 2014 – Aug 2018, University of applied Science Harz, Wernigerode
- Majors: Market Research and Consumer Behavior
- Graduated with distinction

Vocational training as marketing communications specialist

- 2012 – 2014, Dresden Informatik GmbH

TEACHING

Master Seminar on Multilevel Modelling

2023 – 2024

- Target Audience: Master students in Data Science, Statistics, and Econometrics
- The course provides an introduction to the theory and analysis of multilevel models using R, with an exploration of these models from both Bayesian and frequentist perspectives.
- Language of Instruction: English

Programming course: Introduction into Python

2023 – 2025

- Target Audience: Master and Bachelor students in Data Science, Statistics, and Econometrics
- Students will learn the fundamentals of the Python programming language, as well as tools for documentation with Sphinx, testing with Pytest, and version control with Git and GitHub.
- Language of Instruction: English, German

Supervision of theses

2024 – 2025

- Analysis of different initialization approaches for hyperparameter optimization with mini-batch stochastic gradient descent: A simulation study | Bachelor Thesis | TU Dortmund
- Sensitivity analysis and performance evaluation of varying upper thresholds for discrete likelihoods using the softmax-gumbel trick | Master Thesis | TU Dortmund

2021 – 2022

- The influence of response scales on the knowledge gain of underlying cognitive mechanisms: The role of uncertainty and truth perception in the Truth Effect | Bachelor Thesis | Philipps-University of Marburg
- Empirical test of core assumptions of the Referential Theory: Influence of repetition on perceived coherence | Bachelor Thesis | Philipps-University of Marburg
- Identification and testing of relevant psychological factors on truth judgments and the truth effect according to the Referential Theory | Bachelor Thesis | Philipps-University of Marburg

2020 – 2021

- Truth Effect — The role of the response scale in truth effect designs with short delay | Bachelor Thesis | Philipps-University of Marburg

PUBLICATIONS & TALKS

Bockting, F. (2025) Invited Talk: Predictive Prior Elicitation: State of the Art & Current Challenges, Workshop on Bayesian Modelling, Lund University

Bockting, F. & Bürkner, P. C. (2025). elicito: A Python Package for Expert Prior Elicitation. ArXiv

Bockting, F., Radev, S. T., & Bürkner, P. C. (2025). Expert-elicitation method for non-parametric joint priors using normalizing flows. *Statistics and Computing*, 35(5), 132.

Bockting, F., Radev S. T., & Bürkner P. C. (2024) Contributed talk: Normalizing Flows for Simulation Based Expert Prior Elicitation. Presented at MathPsych (Society for Mathematical Psychology)

Bockting, F., Radev S. T., & Bürkner P. C. (2024). Contributed talk: Simulation-Based Prior Knowledge Elicitation for Parametric Bayesian Models. Presented at ISBA (International Society for Bayesian Analysis)

Bockting, F., Radev, S. T., & Bürkner, P. C. (2024). Invited talk: Simulation-Based Prior Knowledge Elicitation for Parametric Bayesian Models. First presented at Bayes@Lund.

Bockting, F., Radev, S. T. & Bürkner, P. C. (2024). Simulation-based prior knowledge elicitation for parametric Bayesian models. *Scientific Reports* 14, 17330.

Heck, D. W., & Bockting, F. (2023). Benefits of Bayesian model averaging for mixed-effects modeling. *Computational Brain & Behavior*, 6(1), 35-49.

van Doorn, J., Haaf, J. M., Stefan, A. M., Wagenmakers, E. J., Cox, G. E., Davis-Stober, C. P., ..., Bockting, F. & Aust, F. (2023). Bayes factors for mixed models: A discussion. *Computational Brain & Behavior*, 6(1), 140-158.

Bockting, F. & Heck, D. W. (2021). Measuring Individual Differences in the Truth Effect: A formal analysis. Fast Talk at MathPsych

Stephan, A., Walter, S., Anton, T., Barkmann, M., Bockting, F., Dielen, G., Dziomba, L., Lang, A., Ruland, M., & Schütze, P. (2021). *Nachwort. In Turing A. M. Computing Machinery and Intelligence. Können Maschinen Denken?* (pp. 131-201). English/German. Reclam.

WORKSHOPS

2024

- Copyright for Computer Programs & Software, TU Dortmund University
- Research Software Engineering Summer School at Karlsruhe Institute of Technology (KIT)

2023

- Theory of Science, Prof. Dr. Zoglauer, University of Stuttgart
- Foundations of Deep Learning for the Social Sciences, University of Tübingen
- The Statistics Wars and Their Casualties (online seminar series), Prof. Dr. Deborah Mayo, Prof. Dr. Roman Frigg, & Prof. Dr. Margherita Harris

2022

- Summer School on Advanced Bayesian Data Analysis with STAN, Dr. Bruno Nicenboim, University of Potsdam
- Interval Hypothesis Testing, Prof. Dr. Daniël Lakens, University of Eindhoven
- Robust Cognitive Bayesian Analysis, Prof. Dr. Jeffrey N. Rouder, University of California
- Bayesian Evaluation of (informative) Hypotheses, Prof. Dr. Herbert Hoijtink, University of Utrecht

2021

- Multinomial-Processing-Tree Modeling – Foundations and Recent Advances, Prof. Dr. Edgar Erdfelder & Prof. Dr. Daniel Heck, University of Mannheim
- Single- vs. Dual-Process Theories, Prof. Dr. Mandy Hüttner, University of Tübingen
- Introduction into Bayesian Statistics, Prof. Dr. Daniel Heck, Philipps-University of Marburg

ATTENDED CONFERENCES

- MathPsych, Society for Mathematical Psychology, Tilburg
- ISBA, International Society for Bayesian Analysis, Venice
- DGP, German Society for Psychology, Leipzig
- EGU, European Geosciences Union, Vienna
- Bayes@Lund, Lund

OTHER EXPERIENCES

- Volunteer work at a soup kitchen; KANA Dortmund
- Volunteer work at a children's home for mentally disabled children and adolescents, Lebenshilfe e.V.
- Fellow of the "Studienstiftung des deutschen Volkes" (2015 – 2020)