



# FLORENCE BOCKTING

## CONTACT

🌐 [florencia-bockting.github.io](https://florencia-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 Hütter, 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)