



Dr. Kai-Robin Lange (he/they)

Data Scientist, Statistician
and NLP Engineer
Born in 1998, German



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About me

I am a statistician specialized in the development of novel NLP methods and models. Working collaboratively across interdisciplinary teams, I currently apply these methods to analyze contemporary societal issues at the intersection of journalism, economics and political science, and social science.

Experience

2021 - Present

Research Associate @ TU Dortmund University

- 2021-2025: Doctoral Researcher, Since 2025: Postdoctoral Researcher
- Organizing lectures, exercises, and seminars
- Organizing and reviewing for scientific journals and conferences
- Supervising master- and bachelor theses
- Acquiring third-party funds
- Conducting research on
 - detecting conspiracy theories in social media
 - spatio-temporal language modeling
 - the German energy transition discourse
 - extracting economic narratives from texts
 - NLP-based media analysis

2025 - Present

External Lecturer @ EBS University of Business and Law

- Lecturer for two NLP courses per year for the Master in Business Analytics

2020 - 2021

Research Assistant @ TU Dortmund University

- Collecting and curating data
- Editing lecture scripts

Education

2021 - 2025, Dortmund

TU Dortmund University

Dr. rer. nat. in Statistics

Grade: magna cum laude (dissertation: magna cum laude, disputation: summa cum laude)
Dissertation: "Extracting economic narratives using natural language processing: A temporal perspective"

2019 - 2021, Dortmund

TU Dortmund University

M. Sc. Statistics, Minor in Computer Science

Grade: 1.5

Master thesis: "Resampling strategies for unsupervised sentiment analysis using lexicon-based text embedding methods"

2016 - 2019, Dortmund

TU Dortmund University

B. Sc. Statistics, Minor in Computer Science

Grade: 1.8



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Skills and Languages

German		Git	
English		SQL	
Python		Docker	
R		Linux	
Java		Windows	

Interpersonal Skills

Problem-Solving		Leadership	
Interdisciplinarity		Teamwork	
Communication		Adaptability	

Awards, Grants, and Reviewing Duties

- 2026: Grant awarded for the research project “Do Investors' Mental Models Transfer Across Markets?”, joint with Paul Grass. Connex Fund, Hans-Riegel Stiftung. Total Sum: 6500€.
- 2025: Best paper award (runner up) at the 11th Text2Story Workshop for the paper “Narrative Shift detection: A hybrid approach of Dynamic Topic Models and Large Language Models”.
- Since 2025: Reviewing for the “Thinking Skills and Creativity” journal, the “Policy Studies” journal, and the “Climate NLP Workshop” at the EMNLP conference.

Publications (Selection)

- Lange, K.-R. (09/2025). Extracting Economic Narratives using Natural Language Processing: A temporal perspective. Dissertation.
- Schmidt, T., Lange, K.-R., Reccius, M., Müller, H., Roos, M., & Jentsch, C. (06/2025). Identifying economic narratives in large text corpora - An integrated approach using Large Language Models. Ruhr Economic Papers #1163.
- Lange, K.-R., Reccius, M., Schmidt, T., Müller, H., Roos, M., & Jentsch, C. (04/2025). Narrative Shift detection: A hybrid approach of Dynamic Topic Models and Large Language Models. Proceedings of the Text2Story'25 Workshop @ ECIR 2025.
- Lange, K.-R., Benner, N., Grönberg, L., Hachcham, A., Kolli, I., Rieger, J. & Jentsch, C. (02/2025). tttA: Tools for Temporal Text Analysis.

Invited Talks (Selection)

- “Mining a rabbit hole: leveraging language models to traverse conspiracy theory narratives in telegram channels”, CMStatistics 2026. Invited Talk. Berlin, Germany (12/26, upcoming).
- “Narrative Shift Detection: A Hybrid Approach of Dynamic Topic Models and Large Language Models”, CMStatistics 2025. Invited Talk. London, United Kingdom (12/25).

Software Publications

- tttA: Tools for Temporal Text Analysis. 09/2024. Python Library. [GitHub](#). [PyPi](#).
- SpeakGer Corpus. 09/2023. Text data corpus. [GitHub](#). [Download](#).
- Lex2Sent. 03/2023. Python Library. [GitHub](#). [PyPi](#).