Janick Weberpals, RPh, Ph.D.

Health Data Scientist

Born 1989 in Germany,
Current location: Boston, MA

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About me

I'm a healthcare data scientist with 8+ years of experience in the design and analysis of large *real-world* clinical database studies in both industry and academia. I'm passionate about the integration of various data modalities (EHR/EMR, imaging, NLP, claims) using deep learning to solve problems in healthcare and causal inference. In addition, I have gained deep clinical knowledge in the fields of cancer and cardiovascular diseases. I have (co-) authored 20+ peer-reviewed methodological and clinical publications and received several awards.

Skills

- R, RStudio, git
- Medical coding standards (ICD, etc.)
- Python, Tensorflow, Keras
- LaTeX, Markdown, Quarto
- HPC, SLURM, Unix
- SQL
- SAS

Education

2018-2020 **Postdoctoral Fellowship** Data Science, Roche Innovation Center, Germany
Deep learning on electronic health record (EHR) data

2015-2018 **Ph.D. Epidemiology** Medical Faculty, Heidelberg University, Germany
Graduated with *Summa cum laude* honors

2015-2018 **Board certification** Bavarian Chamber of Pharmacists, Munich, Germany
Specialized Pharmacist in Drug Information

2010-2015 **Registered Pharmacist** College of Pharmacy, Marburg University, Germany
Pharmaceutical Sciences (PharmD)

Professional Experience

2022- **Instructor in Medicine** Harvard Medical School, Boston, MA, USA
Faculty at Harvard Medical School leading innovative projects utilizing advanced analytics to leverage routinely collected healthcare data (EHR/EMR, imaging, claims) to analyze and generate high-quality comparative effectiveness & safety studies of medical interventions.

2022- **Investigator** Brigham and Women's Hospital, Boston, MA, USA
Working on NIH and FDA-funded projects to leverage large, federated and linked healthcare databases for real-world evidence (RWE) generation. Currently leading an FDA Sentinel Innovation Center project on principled methods to handle missing data in EHR.

2020-2022 **Data Scientist** Hoffmann-La Roche/Genentech, Basel, Switzerland
Awarded "Exceptional Performance" in 2021. Led and collaborated in cross-functional teams to implement and validate ML/NLP algorithms and real-world database studies which supported and expedited clinical teams with regulatory drug applications in oncology and neuroscience. Contributed to R package development which increased speed, transparency and validity of RWE projects.

2018-2020 **Postdoctoral Fellow in Deep Learning on EHR** Roche, Munich, Germany
Implemented deep learning methods to analyze large EHR databases which supported protocol design and strategic decision making in early-stage single-arm clinical trials.

2015-2018 **Doctoral Researcher** German Cancer Research Center, Heidelberg, Germany
Managed, QC'ed and analyzed oncological databases. Partnered with (inter)national cancer registries which resulted in 14 peer-reviewed publications impacting public cancer survival surveillance.

2014-2015 **Research Scholar** University of Florida, Gainesville, FL, USA
Contributed to a multidisciplinary project to develop an EHR-based *predictive* risk model to prevent adverse events among hospitalized patients. The model was implemented in select US hospitals.

Selected Awards & Honors

2018 Stephan-Weiland Award (German Society for Epidemiology)
2018 Advancement Award for best Ph.D. thesis in Epidemiology (German Association for Medical Informatics, Biometry and Epidemiology)
2017 Poster Award (Helmholtz International Graduate School)
2016 & 17 International Society for Pharmacoepidemiology (ISPE) Scholarship

Selected publications (full list: *janickweberpals.github.io/publications*)

Weberpals J, Becker T, Schmich F, Ruettinger D, Theis FJ, Bauer-Mehren A. Deep learning-based propensity scores for confounding control in comparative effectiveness research: a large-scale real-world data study. **Epidemiology** (2021).

Weberpals J, Jansen L, Muller OJ, Brenner H. Long-term heart-specific mortality among 347 476 breast cancer patients treated with radiotherapy or chemotherapy: a registry-based cohort study. **Eur Heart J** (2018).