Bart-Jan Boverhof

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Personal Website
GitHub

About Me

I am a graduated student of methodology and statistics at Utrecht University. My interest mostly lies in machine learning & deep learning. Please also consult my personal website for more information.

Interests

Machine Learning, Deep Learning, Explainable AI, AI for Humanity, Open Science, Bayesian Statistics, Data Visualisation

Education

Utrecht University, The Netherlands 2019-2021
M.Sc. Methodology and Statistics for the Behavioural, Biomedical and Social Sciences
Thesis: "Physiological sensor based prediction of mental workload: A multimodal deep learning approach"

Utrecht University, The Netherlands 2017-2019
B.Sc. Sociology
Thesis: "The Hidden Markov Model: Practical guidelines regarding the sufficient length of a time series and the required degree of heterogeneity of the hidden states."

Experience

PhD Candidate March 2022 – March 2026
Erasmus School of Health, Policy and Management - Erasmus University
Advisors: Prof. Dr. RMPMH Rutten - van Molken and Dr. WK Redekop
Health Technology Assessment for Artificial Intelligence

Research Intern May 2021 – September 2021
ASReview - Active learning for Systematic Reviews
Advisors: Prof. Dr. Rens van de Schoot and Dr. Ayoub Bagheri
Exploration of (deep) neural network architectures in systematic reviews with ASReview

- Participated within-, and contributed towards, an open-source software project for automated systematic reviews
- Developed and implemented various deep neural network architectures for text classification in a systematic review
- Conducted a simulation study contrasting the performance of various models

Research Assistant February 2021 – July 2021
Department of Methodology Statistics, Utrecht University
Advisor: Dr. Vera Toepoel
Organisation ninth edition of the European Survey Research Association conference

- A range of activities regarding the organisation of a scientific conference
- Chairing and monitoring several parallel conference sessions

Research Assistant February 2020 – December 2020
Department of Methodology Statistics, Utrecht University
Advisor: Dr. Peter Lugtig
Organisation second edition of the BigSurv20 - Big data meets survey science - conference

- A range of activities regarding the organisation of a scientific conference

Research Assistant July 2018 – May 2019

National Institute for Public Health and the Environment, Utrecht
Advisor: Dr. Vera Toepoel
Data collection European Union Physical Activity and Sport Monitoring System (EUPASMOS) project

- Instructing participants in utilising physical monitoring equipment
- Interviewing participants regarding their physical health and physical activity

Publications

Boverhof, B.J., van de Schoot, R., & Bagheri, A. (2021, September). ASReview Convolutional Neural Network with HPO plugin *Zenodo*. https://doi.org/10.5281/zenodo.5464656

In-Progress Publications

Boverhof, B.J., Veldkamp, B.P. (*in-progress*).
Working title. Physiological sensor based mental workload assessment: A multimodal deep learning approach

Boverhof, B.J., Simons, J., & Aarts, E. (*in-progress*).
Working title. The Hidden Markov model: Practical guidelines regarding the sufficient length of a time series and the required degree of heterogeneity of the hidden states.

van de Schoot, R., Bagheri, A., Teijema, J., & **Boverhof, B.J.** (*note: author order to be determined*). (*in-progress*). *Working title.* AI-aided systematic review with ASReview: A simulation study comparing the performance machine learning & deep learning models

Skills and Proficiency

Programming skills
Python, R, Keras, PyTorch, TensorFlow, Scikit-learn, Git, LaTeX, SPSS, JAGS, WinBUGS, M*plus*, HLM

Language Ability
Native in Dutch, Proficient in English, Moderate in German

Relevant Coursework

Utrecht University (M.Sc.)

Human Centered Machine Learning	Biomedical Statistics
Mathematical Statistics	Computational Inference with R
Markup Languages & Reproducible Programming	Research Seminar
Bayesian Statistics	Multilevel and Structural Equation Modeling

Utrecht University (B.Sc.)

Programming with Python	Missing Data Theory and Causal Effects
Measurement and Modelling with Social Data	Theory Construction and Statistical Modeling
Social Networks in Theory & Empirical Research	Conducting a Survey