Bart-Jan Boverhof

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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, Medical AI, Open Science, Bayesian Inference, 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 – Present

Erasmus School of Health, Policy and Management - Erasmus University Advisors: Prof. Dr. RMPMH Rutten - van Molken and Dr. WK Redekop Project title: 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

Project title: 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

Boverhof, B.J., Simons, J., & Aarts, E. (in-progress).

PUBLICATIONS

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.

SKILLS AND

Programming skills

PROFICIENCY

Python, R, Keras, PyTorch, TensorFlow, Scikit-learn, Git, LATEX, SPSS, JAGS, WinBUGS, Mplus, HLM

Language Ability

Native in Dutch, Proficient in English, Moderate in German

RELEVANT Coursework **Utrecht University (M.Sc.)**

Human Centered Machine Learning

Biomedical Statistics Computational Inference with R **Mathematical Statistics**

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