PETER BRUUN-RASMUSSEN, PHD

CAUSAL INFERENCE DATA SCIENTIST

SUMMARY

Passionate about increasing industrys adoption of causal inference methods and help provide more effective, personalized, and evidence-based treatment for patients

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SKILLS

Programming
R, Python, git, snakemake, SQL, UNIX, cluster/cloud/high performance computing

Machine Learning
Pytorch, Keras, sklearn

Statistics
Casual inference, study design, targeted learning, potential outcomes, inverse probability weighting, time-to-event, regression analysis etc.

Data Visualization
ggplot, seaborn

Healthcare
Public Health, Epidemiology, Blood Transfusions

CONTACT

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2900 Copenhagen, Denmark

WORK EXPERIENCE

Senior Data Scientist
Søborg, DK
Novo Nordisk, Targeted Learning and Causal Infernece — May 2024--Present
Novo Nordisk, Real-World Science, Rare Diseases — May 2023--April 2024

Postdoctoral Fellow
Copenhagen, DK
Rigshospitalet, Clinical Immunology Department — Dec 2022--April 2023
- Raised 4-years worth of funding for postdoctoral project work
- Lead OPTimize project with the goal of using causal inference methods to determine the optimal hemoglobin threshold for giving blood transfusions

PhD Researcher
Copenhagen, DK
Rigshospitalet, Clinical Immunology Department — Dec 2018--Nov 2022
Novo Nordisk Foundation, Translational Disease Brunak Lab
- Developed a causal inference framework coupled with machine learning to determine the average treatment effect of storage time and sex-matched blood transfusions
- Studied one of Denmarks's largest transfusion databases, comprising 500K patients
- Published as the first author on 3 papers in major journals, including Blood, the most cited journal for the field, and Lancets eClinicalMedicine
- Showcased how causal inference can be utilized on Danish registry data

Researcher
Boston, USA
Harvard Medical School, Loscalzo Cardiovascular Lab — Sep 2019--Feb 2020
- Studied the application of network science at Harvard Medical School

Research Assistant
Copenhagen, DK
Novo Nordisk Foundation, Translational Disease Brunak Lab — Feb 2018--Nov 2018
- Developed tools and the database infrastructure for the Danish Blood Donor Study

EDUCATION

PhD, Biostatistics and Bioinformatics
Copenhagen, DK
University of Copenhagen — Dec 2018--Nov 2022
- A Causal Inference Approach to Red Blood Cell Transfusion Research

MS.c, Biomedical Engineering
Copenhagen, DK
Technical University of Denmark, Lyngby — Sep 2015--Nov 2018
- Specialized in Biomedical Signal Processing

BS, Biomedical Engineering
Copenhagen, DK
Technical University of Denmark, Lyngby — Sep 2012--May 2015

PUBLICATIONS
135 citations

Blood, 2022, *Impact factor 25*
Intervening on the Storage Time of RBC Units and its Effects on Adverse Recipient Outcomes using Real-World Data.
Peter Bruun-Rasmussen et al.

Lancets eClinicalMedicine, 2022, *Impact factor 15*
Estimating the effect of donor sex on red blood cell transfused patient mortality: A retrospective cohort study using a targeted learning and emulated trials-based approach.
Peter Bruun-Rasmussen et al.

eLife, 2023, *Impact factor 8.7*
Associations of ABO and Rhesus D Blood Groups with Phenome-Wide Disease Incidence: A 41-year Retrospective Cohort Study of 482,914 Patients
Peter Bruun-Rasmussen et al.