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

SKILLS

Programming
Python, R, 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, Real-World Science, Rare Diseases
May 2023--Present

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.