

Chi Zhang

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Nationality: Norwegian

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Experience

Statistician / R developer — University of Oslo

2023.04 - present, Oslo, Norway

- Research collaboration with clinicians at Oslo University Hospital using Electronic Health Records, focusing on drug prescription and uses. Developing R package for visualization of EHR.
- Statistician for Norkost: Norwegian dietary survey project to provide analysis and assistance
- Co-lead of PHUSE CAMIS project, comparing statistical methods in R and SAS for pharmaceutical industry <https://github.com/PSIAIMS/CAMIS>
- Co-lead of PHUSE RWD Analysis Guideline for Statistical Programmers Working Group
- Develop optimization algorithm in R for sustainable diet in Nordic collaborative project: NorEden
- Develop and maintain R packages in collaborative projects within drug development and infectious disease surveillance (University of Cambridge), [CSIDS](#) (Norwegian Institute of Public Health)

Lecturer in biostatistics and R programming — University of Oslo

2023.01 - present, Oslo, Norway (part-time)

- Lead the transition of statistics course at the medical faculty using R, GitHub and quarto, which was positively received by both instructors and students. Course website https://ocbe-uio.github.io/teaching_mf9130e/
- Instructor of 3 biostatistics courses and the Carpentries workshop (R for Reproducible Scientific Analysis)

Data scientist — Norwegian Institute of Public Health / Folkehelseinstituttet

2020.10 - 2023.02, Oslo, Norway

- Develop, maintain and improve Sykdomspulsen, the open source infrastructure for real time public health surveillance on infectious disease and mortality in Norway. Sykdomspulsen has been the core of emergency preparedness and response during the COVID-19 pandemic.
- Develop and automate data I/O, cleaning, analysis and reporting tasks from 15 national health registries every day, generating 1000+ daily situational reports for the health authorities for decision making
- Develop the R shiny website for 500+ municipal public health officers (kommunelege) for real-time situational awareness
- Develop and maintain R packages to facilitate standardized visualisation, computing and reporting
- Responsible statistician for the Norwegian Mortality Monitoring (NorMOMO, [link](#)), part of the European network EuroMOMO ([link](#))
- Responsible for Sykdomspulsen's collaboration with Dødsårsaksregisteret (Cause of Death Registry)

Statistical advisor — Oslo Center for Biostatistics and Epidemiology, Oslo University Hospital

2016.08 - 2019.09 and 2021.09 - present, Oslo, Norway

- Provide statistical assistance on methodology and result interpretation to medical researchers and clinicians in 10+ projects
- Collaborate with clinicians and perform clinical data analysis using R, edit, draft and comment on papers
- Supervise statistical work by medical students

Education

Ph.D., Biostatistics — University of Oslo

2022, Oslo, Norway

Thesis: Representation and utilisation of hospital Electronic Health Records data

MSc, Statistics — Imperial College London

2016, London, UK

BSc, Mathematics with Finance, 1st Class Honour — University of Liverpool

2014, Liverpool, UK

BSc, Financial Mathematics, 1st Class Honour — Xi'an Jiaotong Liverpool University

2014, Suzhou, China

Selected Talks

Transforming Medical Statistics Classroom with R and Quarto. 2023. UseR Regional Meeting, Basel ([link](#))

Introducing Sykdomspulsen, an automated public health surveillance platform. 2022. (Youtube [link](#))

Software

qtwAcademic ([link](#)), *cstime* ([link](#)), *csmaps* ([link](#)), *csdata* ([link](#))

For a complete list of softwares, please see this page ([link](#))

Skills

Programming:

- Scientific computing: R, Python, Matlab. Experience with R package development
- Unix/Linux, bash scripting
- Version control and DevOps: Git, Jenkins, Airflow
- Database: SQL
- Web: Quarto, R shiny

Statistics and data skills

- Analysis of complex EHR data
- Observational data
- Regression analysis
- Longitudinal data and time series

Languages

English (professional proficiency), Chinese (native), Norwegian (intermediate), Italian (basic)

Selected Publications

Zhang C., Eken T., Jørgensen S., Thoresen M. and Søvik S. (2022) Effects of patient-level risk factors, departmental allocation and seasonality on intrahospital patient transfer patterns - network analysis applied on a Norwegian single-centre dataset. Published in *BMJ Open*. DOI: 10.1136/bmjopen-2021-054545

Zhang C., Fanaee-T H. and Thoresen M. (2021) Feature extraction from unequal length heterogeneous EHR time series via dynamic time warping and tensor decomposition. Published in *Data Mining and Knowledge Discovery* 35:1760-1784. DOI: 10.1007/s10618-020-00724-6