

The Department of Educational Psychology's Research Methods, Measurement, & Evaluation (RMME) program and the Department of Statistics at the University of Connecticut present:

Machine Learning Prediction Modeling for Longitudinal Outcomes in Older Adults

Dr. Jaime Lynn Speiser, Wake Forest School of Medicine
Friday, 12/10/2021, 12pm

<https://uconn-cmr.webex.com/uconn-cmr/j.php?MTID=macf5fd1f3af4a057a735eeefe6e40af0>

Prediction models aim to help medical providers, individuals and caretakers make informed, data-driven decisions about risk of developing poor health outcomes, such as fall injury or mobility limitation in older adults. Most models for outcomes in older adults use cross-sectional data, although leveraging repeated measurements of predictors and outcomes over time may result in higher prediction accuracy. This seminar talk will focus on longitudinal risk prediction models for mobility limitation in older adults using the Health, Aging, and Body Composition dataset with a novel machine learning method called Binary Mixed Model (BiMM) forest. I will give an overview of two common machine learning methods, decision tree and random forest, before introducing the BiMM forest method. I will then apply the BiMM forest method for developing prediction models for mobility limitation in older adults.



Dr. Jaime Lynn Speiser is an Assistant Professor in the Department of Biostatistics and Data Science at Wake Forest School of Medicine. She pioneered a novel machine learning methodology framework for developing prediction models for clustered and longitudinal binary outcomes called Binary Mixed Model (BiMM) forest. Dr. Speiser is an expert in developing prediction models using machine learning for applications in medicine. Her recent focus is developing prediction models for outcomes in older adults such as falls and mobility limitation using a mix of social, behavioral, cognitive, and psychological comorbidity variables. Here is a link to her Google Scholar page:
<https://scholar.google.com/citations?user=fluySXzVtuMC&hl=en>

ONLINE INTERDISCIPLINARY SEMINARS ON STATISTICAL METHODOLOGY FOR SOCIAL AND BEHAVIORAL RESEARCH: Support for this seminar comes from Department of Educational Psychology's Research Methods, Measurement, & Evaluation (RMME) program and the Department of Statistics at the University of Connecticut (UConn), the Statistical and Applied Mathematical Sciences Institute (SAMSI), and the New England Statistical Society (NESS). This seminar aims to promote connection between the statistics and social/behavioral science communities and encourage interdisciplinary research across faculty and students.

For announcements and WebEx live streaming links, please contact Tracy Burke (tracy.burke@uconn.edu). For questions related to the seminars, please feel free to contact the session organizers, Prof. Xiaojing Wang (xiaojing.wang@uconn.edu) and/or Prof. Betsy McCoach (betsy.mccoach@uconn.edu). For information about previous and upcoming speakers, please visit <https://stat.uconn.edu/online-seminars/> or <https://rmme.education.uconn.edu/>.

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Join by video system: Dial 26213964268@uconn-cmr.webex.com
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