

DBDS Workshop in Biostatistics

Remote Access Only:

Contact kkanagaw@stanford.edu for Zoom dial-in details.

DATE:	October 29, 2020
TIME:	2:30-3:50pm
TITLE:	Machine learning for personalised healthcare: a human-centred approach
SPEAKER:	Dr. Danielle Belgrave Principal Research Manager Microsoft Research, Cambridge UK

Abstract:

Machine learning advances are opening new routes to more precise healthcare, from the discovery of disease subtypes for stratified interventions to the development of personalised interactions supporting self-care between clinic visits. This offers an exciting opportunity for machine learning techniques to impact healthcare in a meaningful way. In this workshop, I will present recent work on probabilistic graphical modelling to enable a more personalised approach to healthcare. The underlying motivation of these methods is to understand patient heterogeneity in order to provide more personalised treatment and intervention strategies. An important element of developing these models is collaboration with domain experts such as social scientists who have a deep understanding of the user perspective of these algorithms. We will use motivating examples from mental healthcare and asthma and allergic diseases.

Suggested Readings:

- ["Machine learning in mental health: A systematic review of the HCI literature to support the development of effective and implementable ML systems."](#)
- ["Dissecting racial bias in an algorithm used to manage the health of populations."](#)
- ["Disaggregating asthma: big investigation versus big data."](#)
- ["Developmental profiles of eczema, wheeze, and rhinitis: two population-based birth cohort studies."](#)
- ["A machine learning approach to understanding patterns of engagement with internet-delivered mental health interventions."](#)