UNIVERSITY OF SOUTH FLORIDA

INTERDISCIPLINARY DATA SCIENCES CONSORTIUM

SEMINAR SERIES

Overcooked Models: Mixingprediction, Explanation, Confounders, and Mediators

Statistical models are most often used for one of two purposes: (i) to predict a future observation from a previously observed process or (ii) to explain the causal mechanisms that underlie the observed world. In practice, a distinction between these two goals is often not recognized in the model-building phase, resulting in an inappropriate application of tools or concepts. One specific area of confusion concerns the notion of confounded or mediated effects, which are irrelevant in the prediction setting, but require special attention when the goal is causal explanation. This talk will provide a high-level overview of these concepts, and point to specific applications in the literature as well as software solutions that are tailored to the two distinct modeling goals.

Featuring **Dr. Travis A Gerke**
Department of Biostatistics and Bioinformatics
Moffitt Cancer Center

Dr. Travis Gerke, ScD is Scientific Director of Collaborative Data Services and Assistant Member in Cancer Epidemiology at Moffitt Cancer Center. His research lab's focus lies in integrative molecular cancer epidemiology, and is driven by concurrent interests in biostatistical methods development, computational biology, and modern datascience practice. In addition to collaborative efforts in the domain of classical cancer epidemiology, his group is involved in several efforts to streamline processing, analysis, and epidemiologic translation of large-scale genomic databases. An emergingresearch interest in clinical epidemiology applies contemporary methods in causal inference to observational data in order to discover optimal treatment sequences. A cross-cutting theme across the lab is the use of R software for data science.

SEPTEMBER 27, 2019

2:00-3:00PM

LOCATION: CMC141

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