Stony Brook University

Biomedical Informatics Grand Rounds

Fei Wang, PhD

Associate Professor, Department of Population Health Sciences,

Weill Cornell Medicine, Cornell University

Machine Learning for COVID-19: Revealing the Mysteries Behind Massive Health Data

Wednesday, Dec 2, 2020 3 pm - 4 pm

Abstract: The new coronavirus disease 2019 (COVID-19) has become a global pandemic. Since the initial outbreak from January 2020 in Wuhan, China, COVID-19 has demonstrated a high transmission rate and a diverse set of clinical characteristics (e.g., high rate of hospital and intensive care unit admission rates, multi-organ dysfunction for critically ill patients due to hyperinflammation, thrombosis, etc.). Huge amount of data has been accumulated from various disciplines during the battling with COVID-19, which provides an unprecedented opportunity and resource for machine learning methods to dig actionable insights from. In this talk, I will summarize the efforts along this direction and introduce some of the research from my lab, as well as point out the challenges and future research directions.

Bio: Fei Wang is an Associate Professor at Department of Population Health Sciences, Weill Cornell Medicine, Cornell University. His major research interest is data mining, machine learning and their applications in health data science. He has published on the top venues of related areas such as ICML, KDD, NeurIPS, AAAI, JAMA Internal Medicine, Annals of Internal Medicine, etc. His papers have received over 13,400 citations so far with an H-index 57. His (or his students') papers have won 7 best paper (or nomination) awards at international academic conferences. His team won the championship of the NIPS/Kaggle Challenge on Classification of Clinically Actionable Genetic Mutations in 2017 and Parkinson's Progression Markers Initiative data challenge organized by Michael J. Fox Foundation in 2016. Dr. Wang is the recipient of the NSF CAREER Award in 2018, as well as the inaugural research leadership award in IEEE International Conference on Health Informatics (ICHI) 2019. Dr. Wang is the chair of the Knowledge Discovery and Data Mining working group in American Medical Informatics Association (AMIA). Dr. Wang's research has been supported by funding agencies including NSF, NIH, ONR, NMRC, MJFF, AHA , PCORI and industries including Amazon, Google, Boehringer Ingelheim and MITRE.

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