BIOSTATISTICS SEMINAR

Extracting Reliable Real-world Evidence from Multi-institutional EHR Data

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The increasing availability of electronic health records (EHR) data offers valuable prospects for biomedical research, enhancing patient care. However, leveraging this data from diverse healthcare systems to provide unbiased, precise decision-making information is a complex task due to varied coding systems, patient populations, and healthcare delivery models. This talk will first cover automated data harmonization using representation learning, which includes co-training multi-source feature embeddings through block-wise overlapping noisy matrix completion. This method finds applications in code mapping, feature selection, and knowledge graph construction. The second part of the talk will delve into federated learning applied to reinforcement learning (RL) frameworks, a vital yet under-explored aspect in current studies, for establishing evidence-based dynamic treatment regimes. I will introduce an innovative federated policy optimization algorithm for offline RL that allows for the analysis of site-specific variables, supported by a theoretical framework.

Tuesday, February 6, 2024, 3:30-4:30PM Eastern

2308 McGavran-Greenberg Hall

Zoom Link:
https://unc.zoom.us/j/94304183888?pwd=SW5kQmJ1bkVVOFN5U2ZiQzR0MThnQT09

Meeting ID: 943 0418 3888

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