UNIVERSITY OF SOUTHERN MAINE

Dubyak Center for Digital Science and Innovation Presents:

Natural Language Processing for Clinical Excellence: The State of Practices, Opportunities, and Challenges

USM Data Science Ensemble
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Abstract Rapid growth in adoption of electronic health records (EHRs) has led to an unprecedented expansion in the availability of large longitudinal datasets. Large initiatives such as the Electronic Medical Records and Genomics (eMERGE) Network, the Patient-Centered Outcomes Research Network (PCORNet), and the Observational Health Data Science and Informatics (OHDSI) consortium, have been established and have reported successful applications of secondary use of EHRs in clinical research and practice. In these applications, natural language processing (NLP) technologies have played a crucial role as much of detailed patient information in EHRs is embedded in narrative clinical documents. Meanwhile, a number of clinical NLP systems, such as MedLEE, MetaMap/MetaMap Lite, cTAKES, MedTagger, and i2b2 have been developed and utilized to extract useful information from diverse types of clinical text, such as clinical notes, radiology reports, and pathology reports. This talk will walk through some successful applications of NLP techniques in the clinical domain with potential opportunities and challenges.

Short Bio Dr. Wang is vice chair of research and assistant professor with a primary appointment in the Department of Health Information Management, School of Health and Rehabilitation Sciences, and secondary appointments in the Intelligent Systems Program, School of Computing and Information, and the Department of Biomedical Informatics, School of Medicine, at the University of Pittsburgh. His research interests focus on artificial intelligence (AI), natural language processing (NLP) and machine learning methodologies and applications in health care. His research goal is to leverage different dimensions of data and data-driven computational approaches to meet the needs of clinicians, researchers, patients and customers. He joined Pitt in June 2021 from the Mayo Clinic where he still holds an adjunct Assistant Professor position.

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