

The GWU Biomedical Informatics Center, CTSI-CN, and Washington DC VA Joint Informatics Seminar Series



Driving Health Equity Through AI and Natural Language Processing

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Link to join: <https://tinyurl.com/4ebcdeew>



Despite being the highest spender on healthcare globally, the United States faces profound health disparities, inequities, and challenges in healthcare access and treatment, and it leads in income-based health disparities. This issue is particularly pronounced among certain demographics, notably black men. Addressing health disparities and eliminating biases would not only benefit the general population but also result in significant cost savings for the healthcare system. In this context, Artificial Intelligence (AI) and Natural Language Processing (NLP) stand as powerful tools with the potential to contribute significantly to understanding, mitigating, and ultimately eliminating health disparities. NLP can provide models that improve health care in a wide range from improving decisions, extracting relevant information, helping in patient triage, and eliminating bias in care. In this talk, I will talk about multiple NLP projects I am involved in that leverages the use of transformer models and Large Language models with the aim to reduce the disparity and bias gap, with a lens that focus on certain demographics and the use of stigmatizing language in medical records, mental health, and patient triage.

Dr. Zirikly, a faculty research scientist at Johns Hopkins University, specializes in applying Natural Language Processing (NLP) and Machine Learning (ML) to clinical informatics tasks related to mental health, stigmatizing language, bias, and social needs, with a focus on health equity. She is currently involved in projects that build models to identify stigmatizing language in medical records and its manifestation in populations experiencing health disparities (e.g., Black patients). Additionally, she develops models to assess and understand suicide risk in clinical records and social media data and explores the use of Large Language models to assist in patient triage. As a postdoc at NIH, Dr. Zirikly developed NLP solutions for retrieving mobility and mental health information to improve the disability eligibility process at the Social Security Administration. She is committed to community work, co-organizing several conferences and workshops focused on ML and NLP.

For more information, please contact BIC@gwu.edu