Natural Language Processing Workshop

Thursday, June 2\textsuperscript{nd}, 2016
8:00am-1:00pm
Fenway Room, The Inn at Longwood Medical
342 Longwood Avenue

NLP is an informatics tool that can be applied to text reports in electronic health records to abstract standard, coded data elements for analysis. This half-day workshop has the goal of promoting the use of NLP for research to promote health and reduce health disparities. We will provide an overview of the method and then present several case examples focused on extracting data on sociodemographic characteristics to examine disparities.

8:00-8:30am  Registration and Breakfast

8:30-8:45am  Introduction and Welcome
Jennifer Haas, MD, MSPH, Professor of Medicine, Brigham and Women’s Hospital

8:45-9:30am  Keynote Address
Using Natural Language Processing to Advance Our Understanding of LGBT Health Disparities
Jesse Ehrenfeld, MD, MPH, Associate Professor of Anesthesiology, Division of Multispecialty Adult Anesthesiology, Associate Professor of Biomedical Informatics, Vanderbilt University Medical Center

9:30-9:50am  Natural Language Processing Overview
Adam Wright, PhD, Associate Professor of Medicine, Brigham and Women’s Hospital

9:50-10:10am  Demonstration
Using the MTERMS NLP System to Identify Patients with Socio-behavioral Characteristics from Clinical Notes
Li Zhou, MD, Assistant Professor of Medicine, Brigham and Women’s Hospital

10:10-10:20am  Coffee Break
10:20-10:50am  Panel 1: Examining Race, Ethnicity, SES, Using NLP
NLP to Examine Patient’s Sociodemographic Characteristics from Clinical Text: A Challenging Opportunity
Li Zhou, MD, Assistant Professor of Medicine, Brigham and Women’s Hospital, or research collaborator
The Social Complexity of Patients: How Might NLP Help?
Alyna Chien, MD, Assistant Professor of Pediatrics, Boston Children’s Hospital

10:50-11:20am  Panel 1 Discussion – Q & A
Moderator: Susanne Churchill, PhD, Executive Director of the Department of Biomedical Informatics/HMS.

11:20-11:50am  Panel 2: Considering Mental Health Disparities Using NLP
Using NLP and machine learning to predict adverse mental health outcomes: Applications in mobile messaging and clinician notes among Safety Net hospital patient populations
Benjamin Cook, PhD, Assistant Professor of Psychiatry, Cambridge Health Alliance
Apache cTAKES and applications focused on autism, suicidality and other neurodevelopmental conditions
Guergana Savova, PhD, Associate Professor of Pediatrics, Boston Children’s Hospital

11:50-12:20pm  Panel 2 Discussion – Q & A
Moderator: Margarita Alegria, PhD, Professor of Psychiatry, Massachusetts General Hospital

12:20pm-1:00pm  Closing Remarks, Lunch, & Networking