Second Workshop on Computational Linguistics and Clinical Psychology: From Linguistic Signal to Clinical Reality 2015

Held at NAACL HLT 2015

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Introduction

In the United States, mental health problems are among the most costly challenges we face. The numbers are staggering: An estimated $57.5B was spent on mental health care in 2006. Some 25 million American adults will have an episode of major depression this year, and suicide is the third leading cause of death for people between 10 and 24 years old. The importance of clinical psychology as a problem space cannot be overstated.

For clinical psychologists, language plays a central role in diagnosis, and many clinical instruments fundamentally rely on manual coding of patient language. Applying language technology in this domain can have an enormous impact: Many individuals under-report psychiatric symptoms, such as active duty soldiers; or lack the self-awareness to report accurately, such as individuals involved in substance abuse who do not recognize their own addiction. Many people cannot even obtain access to a clinician who is qualified to perform a psychological evaluation, such as those without adequate insurance or who live in rural areas. Bringing language technology to bear on these problems could lead to inexpensive screening measures that may be administered by a wider array of healthcare professionals, suited to the realities of healthcare practice.

Researchers have begun targeting such issues, applying computational linguistic methods to clinical psychology with compelling results. Prior to this workshop series, research had looked at identifying emotion in suicide notes, analyzing the language of those with autistic spectrum disorders, aiding the diagnosis of dementia, and screening for depression.

ACL 2014 hosted the first Computational Linguistics and Clinical Psychology Workshop, which brought together the researchers in this nascent field. This workshop was a great success, with accepted papers proposing methods for predicting veteran suicide risk, aiding the diagnosis of dementia, and predicting depression and post-traumatic stress order in social media.

NAACL 2015 hosts the second Computational Linguistics and Clinical Psychology Workshop. Members of the community have come together to organize a hackathon, with a data release and shared task for detecting mental illness as part of this workshop. We hope to build the momentum towards releasing tools and data that can be used by clinical psychologists, and as such, we diverge from the conventional "mini-conference" workshop format, including practicing clinical psychologists on our program committee and as discussants in the workshop. The ability to communicate relevant computational methods and results clearly, connecting the work to clinical practice, is as important as the quality of the work itself, and more important than research novelty.

We received 15 submissions for the main workshop and 3 for the shared task. Of the main workshop submissions, 12 (80%) were accepted: 6 for oral and 6 for poster presentation. Oral presentations will be followed by discussions led by several experts on working with patients and clinical data: Shandra M. Brown Levey, Loring J. Ingraham, John P. Pestian, and Kytja K. S. Voeller. We also have an invited talk from Munmun De Choudhury, an expert in computational social science who has done pioneering work on understanding mental health in social media.

We wish to thank everyone who showed interest and submitted a paper, all of the authors for their contributions, the members of the Program Committee for their thoughtful reviews, our clinical discussants for their helpful insights, and all the attendees of the workshop. We also wish to extend thanks to the Association for Computational Linguistics for making this workshop possible, and to Microsoft Research for its generous sponsorship.

– Meg, Glen, and Kristy

Organizers:

Margaret Mitchell, Microsoft Research (MSR)
Glen Coppersmith, Qntfy
Kristy Hollingshead, Florida Institute for Human and Machine Cognition (IHMC)

Clinical Discussants:

Shandra M. Brown Levey, University of Colorado Denver
Loring J. Ingraham, George Washington University
John P. Pestian, Cincinnati Children's Hospital Medical Center
Kytja K. S. Voeller, Western Institute for Neurodevelopmental Studies and Interventions

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Paul Thompson, Dartmouth College
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Invited Speaker:

Munmun De Choudhury, Georgia Tech

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