***Diagnoses of Mental Illnesses***

***using Artificial Intelligence Based on Text Data***

This project develops and validates *semantic measures*; which involves a method for measuring and diagnosing mental health using open-ended word responses, where the semantic content is analyzed using artificial intelligence. Current methods assesses and diagnoses psychiatric conditions with rating scales and interviews. This project proposes an alternative to these standard methods by developing semantic measures of mental health constructs  in clinical settings.

Word responses address several limitations associated with numerical rating scales. Our studies in the general population show that semantic measures have competitive, or higher, *validity* and *reliability* than rating scales. Furthermore, semantic measures *differentiate* better between psychological constructs than rating scales; where the word responses *describe* the constructs. Thus, the proposed method *measures*, *differentiates* and *describes* the to-be-measured constructs; which constitutes theoretical, empirical and methodological advancements that are crucial in clinical settings.

The project validates the semantic measures for depression and anxiety in clinical settings including primary care and psychiatric clinics. Four clinical collaborators are enthusiastic to partake in our research. The project will fine-tune the artificial intelligence using state-of-the-art natural language processing and machine learning.