



## NLP for Digital Mental Health

### Motivation

Mental health issues are one of the most common illnesses. Thus, in the last years, mental health has become a more prominent problem domain in NLP. In this interdisciplinary research, human language is examined as a tool to better understand emotional and mental states to reduce the emotional suffering. The research directions are manifold. They range from the detection of mental illnesses or suicide risk in social media, the analysis of psychiatric or psycho-therapeutical dialogues, to the development of online therapeutic dialogue systems.

### Task Description

- Interdisciplinary research between psychology and computer science
- Development of new and domain adaptation of current NLP methods for various use-cases, e.g. relapse prediction, cognitive re-framing or treatment progress monitoring.
- Investigation of language as a manifestation of mental states

### References

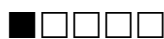
- Pace et al. (2016). What about the words? Natural language processing in psychotherapy. In *Psychtherapy Bulletin* 51, pp. 14-18.
- Rojas-Barahona et al. (2018). Deep learning for language understanding of mental health concepts derived from cognitive behavioural therapy. In *Proceedings of 9<sup>th</sup> LOUHI Workshop 2018*, pp. 44-54.
- Shickel et al. (2020). Automatic detection and classification of cognitive distortions. In *Proceedings of 20<sup>th</sup> BIBE 2020*, pp. 275-280.
- Goharian et al. (2021). Proceedings of the 7th Workshop on Computational Linguistics and Clinical Psychology

### Contact

Analysis



Programming



Literature



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