To find depressive traits of a person by analysing WhatsApp chats

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Abstract. Mental health is one of the least talked about issues in India. It can affect a person in ways one cannot imagine and if not diagnosed and treated properly can lead to tragic incidents. Based on the fact that human behaviour changes when people have depressive traits such as the type and frequency of words they use, sleep patterns and other thoughts that can be measured via their texts, we would like to analyze and draw conclusions.

The reason why we picked WhatsApp chat data is, as it is more personal and they tend to communicate with people close to them when having such traits. This analysis will not only help detect, but also advice on steps to be taken when a positive case is diagnosed.

This project would involve four major steps: (1) Data gathering: by emailing the chat (2) Data pre-processing: cleaning the data (3) Analysis: finding most frequent words and analyzing sleep patterns and (4) Recommendation (psychological and medical).

The project back-end will be done using R Studio and Python; front-end would be web-based (using HTML, CSS, Plotly.js)