Project Aims

Obsessive-Compulsory Disorder (OCD) – a mental health condition where a person has obsessive thoughts and compulsive behaviours [NHS-UK], can cause people to remain in a state of anxiety for a long time and affecting their lives. It's difficult for people with OCD to escape from it.

According to [Goodman, 2014], in the United States, OCD "affects up to **2.3%** of the population over the course of a lifetime and can be disabling". And in China, the number is 2.4% [Huang *et al.*, 2019]. These are incredibly large numbers. If we can make some changes for them, it would be really meaningful.

Based on this, I have designed this app, **OCD Resolver**. The goal of this app is clear — to help alleviate the symptoms of OCD. While individuals with OCD may still pursue the perfect or take compulsory behaviors, they will not be distressed if things don't go as their expectations.

The app is easy to use — whenever you experience obsessive thoughts or compulsive behaviors, regardless of whether they make you feel anxious or not, **you record them here**. On the homepage, you can add a record with just one click. Of course, you can also choose to add some notes.

In addition, this app introduces a wealth of reliable suggestions from the internet designed to alleviate or even treat OCD. While these are not medical advices, they can help individuals with OCD ease their psychological burden on a mental level.

We use for mental states ***happy***, ***neutral***, ***anxious*** and ***distressed*** to record different OCD level. Each state has a weight w. Your mental state is not only related to your OCD symptoms but also to whether you've met your expectations. When you satisfy your OCD expectations and feel fulfilled as a result, you can choose "Happy". On the contrary, you can choose "Anxious" or "Distressed" if you haven't.

We define,

$$w_{\text{happy}} = 0.1, \qquad w_{\text{neutral}} = 0.2, \qquad w_{\text{anxious}} = 0.3, \qquad w_{\text{distressed}} = 0.4$$

The *OCD index* *ocdidx* of a day is defined by the weight of each level and the times of each level, as follows:

$$\text{ocdidx} = \sum_i w_i n_i$$

$$= w_{\text{happy}}\, n_{\text{happy}} + w_{\text{neutral}}\, n_{\text{neutral}} + w_{\text{anxious}}\, n_{\text{anxious}} + w_{\text{distressed}}\, n_{\text{distressed}}$$