**Motor Activity Association with Depression Episodes**

**Description of Data**

Data consists of actigraphy data collected from **23** unipolar and bipolar depressed patients(Condition group). Out of these subjects, **5** subjects were hospitalized during their data collection period, and **18** were outpatients. The severity level of their depression was rated by the Montgomery-Asberg Depression Rating Scale at the beginning and conclusion of the motor-activity recording.

Additionally, the dataset also contains actigraphy data from **32** non-depressed (control group) without psychiatric symptoms.

The dataset contains multiple CSV files for each subject (for Control and condition group), carrying their actigraphy data collected over time. The columns are: **timestamp**(one-minute intervalsData), **date** (date of measurement), **activity** (activity measurement from the actigraph watch). In addition, dataset also contain the MADRS scores in the file *scores.csv.* It contains the following columns: ***number***(patients identifier), ***days***(number of days of measurements), ***gender*** (1 & 2 for female and male), ***age***(in age groups), ***afftype*** (1:bipolar-II, 2:unipolar depressive, 3:bipolar-I), ***melanch*** (1:melancholia, 2: no melancholia), ***marriage*** (1: married, 2: single), ***work*** (1: working or studying, 2: unemployed/leave/pension), ***madrs1*** (MADRS score when measurement started), ***madrs2*** (MADRS when measurement stopped).

**Background**

**Bipolar vs unipolar** depression disorder - The main difference between bipolar disorder and unipolar depression is that mania is not present in the latter.

A person with **bipolar I** will experience an episode of mania (a state of heightened overall activation with enhanced affective expression together with lability of affect), while a person with **bipolar II** will experience a hypomanic episode (a period less severe than a full manic episode).

A person with bipolar I may or may not experience a depressive episode, while someone with bipolar II **will** experience a major depressive episode.

**MADRS** - Montgomery-Asberg Depression rating Scale is a psychiatrist’s methods to measure the severity of depressive episodes in patients.

Cutoff points –

**0 – 6** : Normal

**7 – 19** : Mild

**20 – 34** : Moderate

**34 – 60** : Severe

**Objective** (potential)

The dataset can be used for-

1. Determining the efficacy of psychiatric treatment and its degree for inpatient and outpatients’ cases.
2. Comparing the activity behaviors of depressed and non-depressed subjects.
   1. Identifying potential patterns that can help categorizing the subjects among the two based of their activity statistics.
   2. Sleeping pattern analysis of depressed vs. non-depressed participants.
3. Analysis of MADRS scores with respect to individuals motor activity performance.
   1. Motor activity pattern associated to patients’ showing high, low and negative improvement in MADRS scores.
   2. MADRS score prediction based on motor activity data.