**Dataset**

A preprocessed EEG dataset is used for the investigation of mental disorders. Data was collected using 19 electrode channels from different scalp regions. Electrode elastic cap is common equipment used to collect EEG recordings. Electrode cap fitted over participant's scalp with 19 electrodes placed at specific locations according to the International 10-20 system. 10-20 system is an International standard for electrode placement. These electrodes detect electrical signals generated by the brain and transmit them to an amplifier, which amplifies the signals and converts them into digital data for further analysis. The data included 5-minute eye-closed resting states with 19 channels acquired with a 500 Hz sampling rate. FP1, FP2, F7, F3, Fz, F4, F8, T7, C3, Cz, C4, T8, P7, P3, Pz, P4, P8, O1, and O2. Here odd numbers are on the left side of the head and even numbers are on the right side. EEG data is converted to the frequency domain using the frequency range 0.5-40 Hz. EEG parameters were calculated using six frequency bands delta (1-4 Hz), theta (4-8 Hz), alpha (8-12 Hz), beta (12-25 Hz), highbeta (25-30 Hz), gamma (30-40 Hz). At the time of preprocessing noise and artifacts are removed.

In the dataset, there are PSD (Power Spectral Density) columns for 19 channels using 6 frequency bands which contain (19\*6) = 114 columns. Also, there is coherence in the columns. Coherence is measured between every pair of electrodes of each frequency band. Consider n = 19 so the contains values are (n(n-1)/2), (19(19-1)/2) = 171. Which contain (171\*6) = 1026 coherence columns.

This preprocessed dataset considers a total of 945 participants recording. where 95 participants are healthy control, 266 participants are depressive disorder, and more than 584 participants fall into some other disorders like (anxiety, schizophrenia, addictive, etc)