**Title:**

As we know that unlike some disease diagnoses, doctors can't do a blood test or culture some microorganisms to determine whether a person has a mental illness. Mental health professionals will have to diagnose mental illnesses based on the symptoms that a person has. Basing a diagnosis on symptoms and not on a quantitative medical test, such as a blood chemistry test, a throat swab, X-rays, or urinalysis, is not unusual. So the diagnosis done by the doctor based on the patient symptoms cannot be 100 percent pure due to which patient cannot be recover within the time from the illness and the doctor will have to do hit and trial method to cure the illness (because they don’t know the proper reasons about the illness) whose result will be very bad . When I searched how the psychiatric diagnoses the mental illness patients? I got the following result:

Signs & Symptoms

If several of the following are occurring, it may useful to follow up with a mental health professional.

* Withdrawal — Recent social withdrawal and loss of interest in others
* Drop in functioning — An unusual drop in functioning, at school, work or social activities, such as quitting sports, failing in school or difficulty performing familiar tasks
* Problems thinking — Problems with concentration, memory or logical thought and speech that are hard to explain
* Increased sensitivity — Heightened sensitivity to sights, sounds, smells or touch; avoidance of over-stimulating situations
* Apathy — Loss of initiative or desire to participate in any activity
* Feeling disconnected — A vague feeling of being disconnected from oneself or one’s surroundings; a sense of unreality
* Illogical thinking — Unusual or exaggerated beliefs about personal powers to understand meanings or influence events; illogical or “magical” thinking typical of childhood in an adult
* Nervousness — Fear or suspiciousness of others or a strong nervous feeling
* Unusual behavior – Odd, uncharacteristic, peculiar behavior
* Sleep or appetite changes — Dramatic sleep and appetite changes or decline in personal care
* Mood changes — Rapid or dramatic shifts in feelings.

(Src:https://www.psychiatry.org/patients-families/warning-signs-of-mental-illness)

We know that our body generates a signal of different frequency every seconds that depends upon the situations (environments).In our project we are going to build a device which will extract the signal from the brain. And by using the different engineering concept we will analyze the brain signal and display on the screen (like as ECG) through which medical expert (say Doctor) can easily analyze the causes and types of the mental illness.

So for this project we want some help from the medical expert by knowing the answer of these few questions

Q1.How the signal is generated by the neurons in the brain?

Q2.Is there any difference between the signal (EEG) generated by normal people and abnormal people? If yes then how (please show the explanation with diagram through which we can understand)

Q3. Working of the different parts of the brain .

Q4. How the signal processing is done for different task management?

Q5. We know that brain is divided into different part so which part of the brain is responsible for generating what type of signal.

***Under the guidance of***

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