**CLAIMS:**

1. A method for pre-processing of an electroencephalography (EEG) signal of a user for cognitive load measurement, said method comprising processor implemented steps of:

    a. capturing the electroencephalography signal of the user using a low-resolution wireless electroencephalography signal recording device, wherein the electroencephalography signal is generated corresponding to a stimulus;
    b. detecting a plurality of system artifacts in the captured electroencephalography signal using an artifact detection module;
    c. removing a noisy window from said electroencephalography signal using a noisy window removal module;
    d. detecting an eye blink region in said electroencephalography signal using an eye blink region detection module;
    e. filtering out said detected eye blink region from the electroencephalography signal using an eye blink region filtering module;and
    f. utilizing filtered electroencephalography signal for measuring the cognitive load of the user and subsequently computing different levels of mental workloads on the user using variation of spatial distribution of frontal scalp EEG electrodes for measured cognitive load using cognitive load measurement module.

2. The method of claim 1, wherein the stimulus is a stroop test.

3. The method of claim 1, wherein the plurality of artifacts includes artifacts pertaining to said electroencephalography signal recording device.

4. The method of claim 3, wherein the system artifacts pertaining to said electroencephalography signal recording device is selected from a group comprising of power supply interference, an impedance fluctuation, a spurious noise and an electrical noise and a combination thereof.

5. The method of claim 1, wherein the noisy window is detected using at least one of an application programming interface (API) based software development kit (SDK), a standard deviation and a signal skewness measurement.

6. The method of claim 5, further comprises of indicating a noise level of the noisy window of said electroencephalography signal while using the API based SDK, wherein the noise level of the noisy window is selected from a group comprising of no signal, very poor signal, poor signal, fair signal and good signal.

7. The method of claim 5, further comprises of subdividing said electroencephalography signal into non overlapping windows for calculating the standard deviation of said electroencephalography signal.

8. The method of claim 5, further comprises of subdividing said electroencephalography signal into non overlapping windows for measuring signal skewness measurement of said electroencephalography signal.

9. The method of claim 1, wherein the eye blinks are detected using at least one of a software development kit (SDK), a template based cross-correlation, a template based auto-correlation and a clustering based method.

10. The method of claim 1, wherein the eye blink region is filtered out from the electroencephalography signal using selective high pass filters.

11. The method of claim 1, further comprises of discriminating between at least two levels of measured cognitive load of the user derived out of at least two corresponding stimuli.

12. The method of claim 11, further comprises of indicating variation of spatial distribution of frontal scalp EEG electrodes for measuring at least two levels of cognitive load.

13. A system for pre-processing of an electroencephalography signal of a user for cognitive load measurement, the system comprising:

a. a processor;
b. a data bus coupled to said processor; and
c. a computer-usable medium embodying computer code, said computer-usable medium being coupled to said data bus, said computer program code comprising instructions executable by said processor and configured for executing:

a low-resolution wireless electroencephalography signal recording device adapted for capturing the electroencephalography signal of the user, wherein the electroencephalography signal is generated corresponding to a stimulus;

an artifact detection module adapted for detecting a plurality of system artifacts in the captured electroencephalography signal;

a noisy window removal module adapted for removing a noisy window from said electroencephalography signal;

an eye blink region detection module adapted for detecting an eye blink region in said electroencephalography signal;

an eye blink region filtering module adapted for filtering out said detected eye blink region from the electroencephalography signal for measuring the cognitive load of the user; and

a cognitive load measurement module adapted for utilizing filtered electroencephalography signal for measuring the cognitive load of the user and subsequently computing different levels of mental workloads on the user using variation of spatial distribution of frontal scalp EEG electrodes for measured cognitive load.

**14.** The system of claim 13, wherein the eye blink region is filtered out from the electroencephalography signal using selective high pass filters.

**15.** The system of claim 13, wherein the plurality of artifacts includes artifacts pertaining to said electroencephalography signal recording device.

**16.** The system of claim 15, wherein the artifacts pertaining to said electroencephalography signal recording device is selected from a group comprising

of power supply interference, an impedance fluctuation, a spurious noise and an electrical noise and a combination thereof.