

# RESEARCH PARTICIPANT CONSENT FORM

## Title of the Research Study:

EEG Motor Imagery Data Analysis for BCI Application Using Deep Learning

## Purpose of the Study:

This study aims to acquire EEG data during motor imagery tasks and use it to train, test, and validate a deep learning model for Brain-Computer Interface (BCI) applications such as wheelchair control. The project is part of academic research.

## Participant Tasks:

As a participant, you will:

- Wear an EEG headset (OpenBCI Ultracortex Mark IV – 16 channel).
- Perform motor imagery (MI) tasks — the imagination of limb movement without any actual physical movement.

Tasks include:

- Imagining left hand movement
- Imagining right hand movement
- Imagining both hands movement
- Imagining both legs movement
- Rest/relaxed state in between each task

Movement includes flexing and extending the limbs. The session will last for approximately 11 minutes continuously.

## Potential Discomforts:

There are no risks of injury or hazards. However:

- Mild discomfort or slight pain may occur due to pressure of electrodes on the scalp.
- You may experience mental fatigue or difficulty concentrating during the 11-minute task session.

## Voluntary Participation & Withdrawal:

Participation in this study is completely voluntary. You may withdraw at any time without any consequences.

## Confidentiality:

Your identity will remain anonymous in all data records and reports. You will be referred to only by a unique subject ID (e.g., Subject001).

## Demographic Information:

Name: \_\_\_\_\_

Age: \_\_\_\_\_

Gender:  Male  Female  Other: \_\_\_\_\_

Handedness:  Right  Left  Ambidextrous (can use both hands equally well)

## Relevant Medical Conditions:

- Epilepsy or seizure disorders
- Brain injury or trauma
- Neurodegenerative diseases (e.g., Parkinson's, Alzheimer's)
- Mental health disorders (e.g., anxiety, depression)
- Scalp skin conditions (e.g., eczema, psoriasis)
- Migraine or chronic headaches
- Heart pacemaker or other implants
- None
- Other: \_\_\_\_\_

## Consent Declaration:

I, the undersigned, hereby consent to voluntarily participate in this research study. I have read and understood the purpose, procedures, possible risks, and confidentiality policies of this study. I understand that I may withdraw at any time.

Participant Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Witness Declaration:

I confirm that the participant voluntarily consented after being informed about the study.

Witness Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

## Investigator Statement:

I have explained the study to the participant in a language they understand and ensured their voluntary participation.

Investigator Name: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Note:** This study will comply with any applicable legal and ethical guidelines for human research, including data privacy and human subject protections as outlined by national/institutional standards.