

Vacancy Announcement

A Research Project entitled “*Towards Mental Health Resilience: A Psychophysics-Driven EEG Framework for Early Detection and Risk Stratification of Anxiety and Depression in East West University Students,*” funded by the East West University Center for Research and Training (EWUCRT), is seeking applications for the following positions.

Research Assistant/Associate: Three (03) positions

Details of the positions are given below:

- RA-1: EEG and Electronic Device Specialist – 01 position (12 months)
- RA-2: Machine Learning and Deep Learning Engineer – 01 position (12 months)
- RA-3: Psychophysics Experiment and Data Management Assistant – 01 position (10 months)

Duties and responsibilities:

- **RA-1 (EEG and Electronic Device Specialist):** Set up, calibrate and safely handle the 32-channel wireless EEG acquisition system and associated electronic recording devices, including electrode placement, impedance checks, real-time monitoring of signal quality, and basic hardware troubleshooting, ensuring compliance with safety and data-acquisition protocols.
- **RA-2 (Machine Learning and Deep Learning Engineer):** Carry out EEG data preprocessing (filtering, ICA-based artifact removal, epoching), feature extraction, and implementation of machine learning and deep learning pipelines, including model training, evaluation, and integration with analysis and visualization software.
- **RA-3 (Psychophysics Experiment and Data Management Assistant):** Coordinate participant recruitment and session scheduling, bilingual informed consent, and administration of the Bangla DASS-21 and valence/arousal ratings; program and run the psychophysics-driven visual and auditory stimulus paradigms (e.g., PsychoPy) with accurate stimulus–EEG event marking; and maintain session logs, data-quality records and the coded, anonymized study dataset.

Common duties for all positions:

- Conduct literature reviews on EEG-based emotion recognition, psychophysics, and anxiety/depression screening, and assist in preparing the study protocol, stimulus schedule, and ethical documentation as per EWUREC approval.

- Assist in participant recruitment, bilingual informed consent, administration of the Bangla DASS-21 and brief valence/arousal ratings, and setup of psychophysics-driven visual and auditory stimulus presentation with accurate stimulus–EEG synchronization.
- Maintain coded, anonymized datasets and the secure data-management workflow (study codes, encrypted transfer to EWU-approved servers, role-based access), and follow the stop-and-referral protocol during participant-facing sessions.
- Prepare figures, tables, technical summaries, reports and presentations, assist in manuscript preparation and dissemination of outcomes through conferences or journals, maintain documentation of codes, scripts and datasets, and perform other research-related tasks assigned by the Principal Investigator/Co-Investigators.

Qualification:

- Minimum B.Sc. in Computer Science and Engineering, Electrical and Electronic Engineering, Software Engineering, Data Science, Biomedical Engineering, or a related discipline from a recognized university; M.Sc. or final-stage M.Sc. will be preferred.
- For RA-1: hands-on skills in electronics, sensors and biomedical/EEG instrumentation, device calibration, signal acquisition, and hardware troubleshooting.
- For RA-2: strong programming, analytical and problem-solving skills with proficiency in Python and familiarity with machine learning, deep learning, and biosignal processing tools (MNE-Python, EEGLAB, TensorFlow, PyTorch, scikit-learn).
- For RA-3: experience in conducting experiments or surveys with human participants, questionnaire administration and research data management; familiarity with stimulus-presentation tools (PsychoPy, E-Prime), Python and basic statistical analysis; fluent Bangla and English communication.
- Good communication, documentation and academic writing skills, sensitivity in working with human participants in mental-health-related research, and willingness to follow ethical research practice (Declaration of Helsinki and EWUREC conditions).

Experience (If Applicable):

- Experience in research or project work involving human-participant data collection, preprocessing, experimentation, analysis, documentation, and reporting will be preferred.
- Prior experience as a Teaching Assistant, Graduate Teaching Assistant, Research Assistant, intern, or in similar academic/research roles will be considered an advantage.

- Experience with EEG or other biosignal hardware and software (Neuracle/NeuSen, OpenBCI, Emotiv, MNE-Python, EEGLAB), psychophysics stimulus-presentation tools (PsychoPy, E-Prime), Python, TensorFlow, PyTorch, statistical analysis, data visualization, or publication writing will be treated as an added advantage.

Job Type & Duration:

RA-1 and RA-2: Contractual, project-based appointment for 12 months.

RA-3: Contractual, project-based appointment for 10 months.

Salary:

Research Assistant (RA-1, RA-2 and RA-3): BDT 20,000/= (consolidated per month)

Application Submission Deadline: 27 October 2026

Application Procedure:

Interested candidates should submit an application with a current CV to Professor Dr. Ahmed Wasif Reza, Principal Researcher, at wasif@ewubd.edu by the application submission deadline mentioned above. Applicants must mention the position applied for (RA-1, RA-2 or RA-3) in the subject line of the email. Candidates may apply for more than one position by stating their order of preference in the application.

[NB: Only shortlisted applicants will be contacted for the next round of selection]