**Title of the Project :** Org Mind:Privacy Preserving Depression detection for workplaces using ML.

**Name of the Students :** Naveena.H , Naveena Sree

**Register Number(s) :** 211423104407 , 211423104408

**Name of the Guide :** Dr.K.Sangeetha

**ABSTRACT**

The early and accurate detection of Major Depressive Disorder (MDD) is a significant challenge in modern healthcare, with traditional diagnostic methods often being subjective and time-consuming. This project addresses the limitations of unimodal diagnostic aids by developing a robust multimodal system for depression detection. The proposed system integrates three distinct data streams to create a holistic view of a user’s mental state: physiological data from Electroencephalogram (EEG) signals, behavioral cues from facial expression recognition, and self-reported subjective data from standardized survey forms. The primary objective of this work is to demonstrate that a multimodal approach can achieve significantly higher accuracy and reliability compared to systems that rely on a single source of information. For the EEG component, key features such as power spectral density were extracted from brainwave signals to identify neurological markers associated with depressive states. Concurrently, a Convolutional Neural Network (CNN) was designed and trained to classify facial expressions from video data, capturing subtle affective cues. This was supplemented by data from a [mention the specific survey, e.g., PHQ-9] questionnaire, providing essential contextual information.