**LITERATURE SURVEY**

A lot of work is being done related to application of Machine Learning techniques to predict depression on different types of available datasets. Some works of wellknown authors are described below:

The work conducted by Marzieh Mousavian et al.[5] on “Feature Selection and Imbalanced Data Handling for Depression Detection” in which Random Forest Classifier shows the best result as compared to the other Machine Learning models used, followed by SVM with a Gaussian Kernel.

Md Rafiqul Islam et al.[6] proposed a model using machine learning methods with social network data for diagnosis of depression. The model shows the accuracy between 60% to 80% for the classification models with Decision Tree showing the highest accuracy.

Hatoon AlSagri et al.[7] conducted a work where he used Machine Learning techniques to approach a problem in Twitter in which Depression was detected using content features and activity features and the maximum accuracy achieved was 82.5% by Linear SVM Model.

Raihan Sultana et al.[8] proposed a anxiety and depression detection model using ML and DL approaches such as CNN, Linear Regression, LDA, KNN and Support vector machine, out of which CNN outperforms with an accuracy of 96.8% for depression and 96% for anxiety.

Swasthika Jain et al.[9] used multimodal depression detection technique using deep neural network(D-ResNet) and paragraph-vector based kernel extreme machine learning model(PVKELM). The accuracy obtained by the model is 89%.

Subrajeet Mohapatra et al.[10] proposed a model of early accessment of depression using machine learning model. They used stacked SVM model and achieved an accuracy of 89.4%. Milena Cukic et al.[11] used EEG and HFD signals as features for seven ML algorithms including Naive Bayes classifier, Logistic Regression, Random Forest, Decision Tree, Support Vector Machines and Multilayer Perception, with the linear and polynomial kernel. Average accuracy of the classifiers varies from 90.24% to 97.56%

Lu, Shengfu et al.[14] build a depression classification model using eye-movement data and ELM and also used Particle Swarm optimization for optimizing the parameters. The accuracy, sensitivity and specificity of the model using improved chaotic projection model and Gauss mutation strategy are 88.55%, 87.71% and 89.42%, respectively.