**MODULES**

**Data Pre-processing:** The dataset contains both numeric and non-numeric data. The categorical input features, numeric and non- numeric, are one-hot-encoded and the class labels are label-encoded to ‘1’ which represents the Depressed Class and ‘0’ which represents the Not Depressed class. Thereafter scaling is performed on the data. The input and output variables are separated and a train-test split is performed.

**Models Implementation:** This work uses various classification models in Machine Learning such as Logistic Regression, RF classifier, Extra Trees Classifier, Decision Tree Classifier, KNN, Gaussian Naive Bayes Classifier and Extreme Learning Machine, to predict depression by using the CDC dataset.

**Hyper-parameter Tuning:** Hyper-parameter Tuning is performed using Grid Search CV for each of the models and the best parameters are chosen to train the models. After model training, the models are applied on the test sets and then evaluated.

**Model Evaluation:** This module focuses on identifying anomalies in credit card transactions that may indicate fraudulent behavior. It utilizes specialized algorithms designed to detect irregular patterns or deviations from the norm, providing an additional layer of sophistication in fraud detection.

**User Interface and Reporting:** The system includes a user interface module for interacting with the system, inputting parameters, and receiving outputs. It may also generate detailed reports and visualizations to aid in the interpretation of results. This module ensures that the system is user-friendly and accessible to relevant stakeholders, such as analysts and decision-makers.