LITERATURE SURVEY

Dr. R. Geetha Ramani et al. [1] has proposed a system to classify PD and Non-PD Patients by the following methods binary Logistic Regression, Linear Discriminant analysis (LDA), Partial Least square Regression (PLS), Random tree (Rnd tree) and Support Vector Machine (SVM). The Dataset is the Parkinson ’s disease Data acquired from the UCI Repository. The training dataset comprises of 197 samples with 22 features extracted from the Patients. Fisher filtering feature selection algorithm was found to be an effective feature ranking system. The Rnd tree algorithm achieved 100% classification accuracy while the LDA, c4.5, cs-Mc4 and K-Nn Yielded accuracy results greater than 90%. Among all, the PLS algorithm achieved the Least accuracy Of 69.74%.

David Gil A et al. [2] Proposed methods based on ANNs and SVMs to aid the Specialist in the diagnosis of PD. The Parkinson database is taken from the UCI Machine Learning Repository. It was used for training and testing experiments. The SVM produces better results than the MLP. The SVM shows a high accuracy of around 90%. Other parameters that reach very high accuracy are "Sensitivity" And "Negative Predictive Value" with accuracy values of 99.32% and 97.06% respectively.

Ipsita Bhattacharya et al. [3] used a Data Mining tool-Weka, They Pre Processed the dataset on which they have worked and then using one of the Classification Methods I.E. Support Vector Machine Method (SVM), they distinguished people with Parkinson’s Disease from the healthy people. Appling SVM, they have tried to find the best possible accuracy on different Kernel values for the given dataset. The dataset consist of 197 Voice Recording samples are there of 31 people from which 23 are having the Parkinson Disease. On changing the split ratio and repeating 4 the test they achieved better result. On the random split of dataset, they concluded that the best accuracy achieved was 65.2174%.

Samavedham et al. [4] proposed an innovative and effective approach for monitoring the disease progression and clinical diagnosis, which is based on the combination of Self-Organizing Maps and Least Squares Support Vector Machines. The proposed approach can achieve an accuracy of up to 97% concerning the differential diagnosis of PD using the PPMI dataset. The same group of authors used unsupervised learning techniques to identify reliable biomarkers to aid the diagnosis of neurodegenerative diseases.

Segovia et al. [5] demonstrated a new method based on SVMs and Bayesian networks to separate IPS from APS (Atypical Parkinsonian Syndromes) that makes use of the 18FFDG PET dataset that allows assessing the glucose metabolism of the brain. Their methodology achieved an accuracy rate over 78%, a reasonable result between sensitivity and specificity, suggesting the proposed method is suitable to assist the diagnosis of PD.