Parkinson Disease Prediction

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Abstract: *Parkinson's disease is a progressive disorder of the central nervous system affecting movement and inducing tremors and stiffness. It has 5 stages to it and affects more than 1 million individuals every year in India. This is chronic and has no cure yet. It is a neurodegenerative disorder affecting dopamine-producing neurons in the brain.With the increase in the severity of the disease, the patient's voice gets more and more deteriorated. The non-invasive treatments for voice analysis are available that helps in ameliorating the life quality of a patient. Thus, for building the telemonitoring and telediagnosis models for prediction, the speech analysis has been tremendously increased. The proper interpretation of speech signals is one of the important classification problems for Parkinson's disease diagnosis. Deep learning and machine learning techniques have been used as a part of the discovery for the efficient classification of PD. The various classification models like support vector machines, naive Bayes, deep neural networks, decision tree and random forest are effectively employed for classification purposes.The analysis of results of different research works showed that both machine learning and deep learning algorithms have shown promising future and therefore paving a better way for the detection of Parkinson's disease at its earlier stages. The classification accuracy achieved by the machine learning classifier.*

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