Detecting Parkinson's Disease Using Machine Learning

1.1 Parkinson's Disease

Parkinson's disease is a progressive disorder of the central nervous system affecting movement and inducing tremors and stiffness. Parkinson's disease is the second most common age-related neurodegenerative disorder after Alzheimer's disease. An estimated seven to 10 million people worldwide have Parkinson's disease. Men are 1.5 times more likely to have Parkinson's than women.

The disease affects patients' quality of life, making social interaction more difficult and worsening their financial condition, due to the medical expenses associated with the disease.

1.2 Project Objectives

This project is a direct application of Machine Learning concepts and techniques covered during the course. Hence, you will be using the same libraries we used to use in our Labs.

The only new thing is introducing a new classification algorithm called eXtreme Gradient Boosting (XGBoost). XGBoost is a Python library and the classifier name is XGBClassifier.

After implementing the classification using XGBoost, classify the same data using any other classifier and compare results

1.3 Implementation Steps

You will follow the same steps you applied in previous labs.

1.4 Deliverables

1.4.1 Project Report that will include

- Project description
- Brief explanation of XGBoost algorithm
- Implementation Steps with screenshot of code used in every step along with necessary plots and graphs.

1.4.2 Work Presentation

Each trainee will be given 20 minutes to show his working code to all attendees through screen sharing.

1.5 Dead Line

- The reports should be uploaded to Google Classroom before Friday 22/5/2020.
- The presentation will be on Friday 22/5/2020 in the same course timing 12:00H to 16:00H