DOCTOR2U

EMPLOYER PROJECT WITH DOCTOR2U

Title: Parkinson's Disease Detection System

Field: Parkinson's Disease Detection System

Level: Bachelor's Degree, Masters

Project Description:

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 10 million people worldwide. This is chronic and has no cure yet. It is a neurodegenerative disorder affecting dopamine-producing neurons in the brain.

To predict a disease early, it has many advantages on the prognosis. In this project, students will be involved in detecting Parkinson's Disease with Python and contributing further approaches to improve the existing machine learning algorithms implemented. This involves importing the XGBClassifier from the xgboost library and is an implementation of the scikit-learn API for XGBoost classification. The main objective of this is to build a model to accurately detect the presence of Parkinson's disease in an individual.

Students are expected to use the Python libraries scikit-learn, numpy, pandas, and xgboost, together with the involved team, and build a model using an XGBClassifier. This includes loading the data, getting the features and labels, scaling the features, and splitting the dataset, building an XGBClassifier, and then calculating the accuracy of the model, while comparing it with the other existing models.

Insights from what was built are to be delivered and through this, students will gain key skills that are expected of them in their field of study, along with maximising their employability.

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sample signature
Supervisor's signature

Date: May 1st, 2021