

Project Design Phase-I
Proposed Solution Template

Date	25 September 2022
Team ID	PNT2022TMID13049
Project Name	Project - Detecting Parkinson's Disease using Machine Learning
Maximum Marks	2 Marks

Proposed Solution Template:

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	The main objective of the model is to develop a computer-aided diagnostic method to diagnose PD patients.
2.	Idea / Solution description	Using a machine learning model, developing a model that automatically diagnoses PD patients using the MRI images of the brain thus reducing cross-examiner variability and the time required to accurately differentiate between PD and Control subjects.
3.	Novelty / Uniqueness	Unlike other models here, perform and compare various algorithms like Random forest, Linear regression, XGBoost and Sklearn for better efficiency of prediction.
4.	Social Impact / Customer Satisfaction	<ol style="list-style-type: none"> 1. Easily find out whether the patient has PD disease or not. 2. Diagnosis of the disease. 3. Reduce the death rate. 4. Improve the success rate.
5.	Business Model (Revenue Model)	The model used is a Random Forest classifier where the patient will be able to diagnoses the disease using MRI images of the brain.
6.	Scalability of the Solution	As the dataset size is huge, the noise associated with the data is also huge and the preprocessing to be done is also high in this case. The amount of the data that is to be processed for the given dataset is extremely huge so as a result high configuration devices are used to process these huge data. The response of the data is purely dependent on the data which is collected from the previous records.