Project Design Phase-I
Proposed Solution Template

Team ID	PNT2022TMID24632
Project Name	Project - Detecting Parkinson’s Disease using Machine Learning
Maximum Marks	2 Marks

Proposed Solution Template:

Project team shall fill the following information in proposed solution template.

S.No.	Parameter	Description
1.	Problem Statement (Problem to be solved)	Parkinson disease (PD) is a progressive neuro degenerative disorder that impacts more than 6 million people around the world. Parkinson's disease is non-communicable, early-stage detection of Parkinson's can prevent further damages in humans suffering from it.
2.	Idea / Solution description	Our goal is to quantify the visual appearance (using HOG method) of these drawings and then train a machine learning model to classify them. In this project, we are using, Histogram of Oriented Gradients (HOG) image descriptor along with a Random Forest classifier to automatically detect Parkinson’s disease in hand-drawn images of spirals and waves.
3.	Novelty / Uniqueness	The project is done entirely using a different approach with using classification models.We have implemented using beyond the given data set.
4.	Social Impact / Customer Satisfaction	However, it has been observed that PD's presence in a human is related to its hand-writing as well as hand-drawn subjects. From that perspective, several techniques have been proposed by researchers to detect Parkinson's disease from hand-drawn images of suspected people. One of the indications of Parkinson’s is tremors and rigidity in the muscles, making it difficult to draw smooth spirals and waves. It is possible to detect Parkinson’s disease using the drawings alone instead of measuring the speed and pressure of the pen on paper.
5.	Business Model (Revenue Model)	As this is a medical domain, it is not legal to mint money out of it.
6.	Scalability of the Solution	This solution is completely scalable in all aspects , apart from being agile , simple and faster.