

**Project Design Phase-I**  
**Proposed Solution Template**

Date	19 September 2022
Team ID	PNT2022TMID22047
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)	Parkinson's disease is a chronic, progressive neurodegenerative ailment due to the loss of dopamine in nerve cells. The disease can't be cured but early detection makes people take proper medication to improve their quality of life.
2.	Idea / Solution Description	Our goal is to quantify the visual appearance(using the HOG method) of these drawings and then train a machine learning model to classify them. We use a 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 accuracy of our project will be high. The OpenCV techniques are also used to eliminate even the use of paper for drawings contributing to the novelty factor.
4.	Social Impact / Customer Satisfaction	The user-friendly web app is created. Early detection of Parkinson's disease with high accuracy.
5.	Business Model (Revenue Model)	The application is free of cost. Any person can use it from anywhere.
6.	Scalability of the Solution	The dimensionality reduction process can be adjusted to produce precise predictions with an increase in the features taken into account.