

## PROJECT PHASE 1

### PROPOSED SOLUTION TEMPLATE

DATE	19 September 2022
TEAM ID	PNT2022TMID05881
PROJECT NAME	Detecting Parkinson's Disease using Machine Learning
MAXIMUM MARKS	4 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's disease cannot be cured, but early diagnosis and the right medicine can lessen the symptoms and enhance quality of life. Our main goal is to use the Random Forest classifier to predict the disease and to automatically identify Parkinson's disease in hand-drawn spirals and waves.
2	Idea / Solution description	In this project, we're utilising the HOG (Histogram of Oriented Gradients), which combines the Random Forest Classifier with an image detector and processor to automatically identify Parkinson's Disease in a hand-drawn image of waves and spirals.
3	Novelty / Uniqueness	A feature descriptor used in computer vision and image processing for object detection is the histogram of oriented gradients (HOG). The method counts instances of gradient orientation in specific areas of a picture. Combining this with random forest may improve tree construction. Combining the two will assist in creating the model.
4	Social Impact/ Customer Satisfaction	In the Scientific perspective, the "Early" is easy to comprehend within the Framework of Disease pathology and its manifestation, making an Economic Burden on the Health Care System, Society and the patients themselves so the Early Detection can Reduce that cost burden
5	Business Model (Revenue Model)	This project model emphasises and focused on helping people who have Parkinson's disease and are receiving medical therapy.

6	Scalability of the Solution	Convergence and numerical precision problems, which can cause problems for the algorithms employed in logistic and linear regression as well as neural networks, aren't as significant in RF due to its nature. This means that unlike with a NN, there is no need to translate the variables to a common scale.
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