

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

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|---------------|---|
| Date          | 06 October 2022   |
| Team ID       | PNT2022TMID05458  |
| 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 the early detection of the disease makes people take proper medication to improve their life quality.   |
| 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 also contributes 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. It can be used by any person from anywhere.   |