

## Ideation Phase

### Define the Problem Statements

|               |  |
|---------------|--|
| Date          | 19 September 2022                                    |
| Project Name  | Detecting Parkinson's Disease using Machine Learning |
| Maximum Marks | 2 Marks  |

#### Problem Statement:

More than 10 million people are living with Parkinson's Disease worldwide, according to the Parkinson's Foundation.

The project aims at presenting a solution for Parkinson's disease detection using Spiral Drawings and CNN. The main idea behind the implementation is to classify a person as Healthy or having Parkinson's disease by looking at the Spiral Drawing made by the person. The Spiral Drawing created by a healthy person will look almost similar to a standard spiral shape. However, a spiral drawn by a person with Parkinson's disease will highly deviate from a perfect spiral shape and look distorted due to slow motor movements and decreased coordination between hand and brain.

#### Example:



| Problem Statement (PS) | I am (Customer) | I'm trying to | But            | Because   | Which makes me feel          |
|------------------------|-----------------|---------------|----------------|---|------------------------------|
| PS-1                   | Human Volunteer | MRI Scan      | Expensive      | The strong magnetic fields and radio waves to produce detailed images of a human body                                 | Expensive and Time consuming |
| PS-2                   | Human Volunteer | SPECT scan    | Time consuming | The gamma camera will rotate around your body, creating three-dimensional images of your internal organs and tissues. | Anxious and frustrating.     |