Project Title: Detecting Parkinson's Disease using

Machine Learning   **TTeam ID: PNT2022TMID09607**

Define CS, fit into	1. CUSTOMER SEGMENT(S) `CS`	6. CUSTOMER `CC`	5. AVAILABLE SOLUTIONS `AS`	Explore AS,
	• Parkinson's disease is a progressive disorder that affects the nervous system and the parts of the body controlled by the nerves. • Parkinson's patient have symptoms of Tremor, Slowed movement (bradykinesia), Rigid muscles, Writing changes, Impaired posture and balance, Loss of automatic movements, Speech changes.	• Accurate prediction of disease. • Early prediction of the disease.	• The physician takes a medical history and does a physical examination. • Performs a neurological examination, testing agility, muscle tone, gait and balance. • PET and MRI scan also used by doctor for classification. • In Machine learning field Several algorithms are proposed for classification.	

Focus on J&P, tap into BE, understand	2. JOBS-TO-BE-DONE / PROBLEMS `J&P`	9. PROBLEM ROOT CAUSE `RC`	7. BEHAVIOUR `BE`	Focus on J&P, tap into BE, understand
	• Parkinson patient have problem of rigid muscles and writing changes. • We have to collect the drawing of normal and parkinson patients. • Using the drawing, we have to detect the presence of parkinson disease by applying necessary algorithm.	• Lack of data • New to field of study	• Random forests are preferred over decision trees is that they are stable and are low variance models. • They also overcome the problem of overfitting present in decision trees. Since they use bootstrapped data and random set of features, they ensure diversity and robust performance. • They are immune to curse of dimensionality as they do not consider all the features at one time for individual trees. • The main disadvantage of random forests is their lack of interpretability.	

Identify strong TR & EM	3. TRIGGERS `TR`	10. YOUR SOLUTION `SL`	8. CHANNELS of BEHAVIOUR `CH`	Extract online & offline CH of BE
	• Parkinson disease are easy to treat if we dectect in early stage. • Provide more efficient algorithm to detect the parkinson disease in its early stage. **4. EMOTIONS: BEFORE / AFTER** `EM` Before: • Does not know about outcome of prediction. After: • Got idea to detect parkinson disease in early stage. • Certain about prediction and to take necessary	• The project aims at presenting a solution for parkinson's disease detection using suitable machine learning algorithms. • Algorithms such as random forest and decision trees are used for disease prediction. • We will load the dataset into dataframe and get the feature and label ,preprocess the data and classify it.	**8.1 Online:** • If we use online channels, then the Customer can check their result with online comparison using our platform. **8.2 Offline:** • offline channels • If the disease predicted then the customer need to go to Hospital for Treatment in offline mode.	