Explore

# **CUSTOMER SEGMENT(S)**

- -Medical specialist + specialist nurses
- -People with Parkinson's disease and family
- -General practitioner community nurses
- -Occupational therapist
- -Physical therapist
- -Psychiatrist
- -Psychologistor neuropsychologist
- -Social worker
- -Dietitian
- -Speech and Language therapist
- -Clinics/hospitals
- -Device manufacturer's/software developers

# **6. CUSTOMER CONSTRAINTS**



-Inaccurate forecasts

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- -Failure to update or replace outdated systems
- -Lack of assurance

### 5. AVAILABLE SOLUTIONS



- -Lab tests, such as blood tests, to rule out other conditions that may be causing symptoms.
- -Imaging tests such as an MRI, ultrasound of the brain and PET scans: also may be used to help rule out other disorders
- -Classification methods using various algorithms.

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#### 2. JOBS-TO-BE-DONE / PROBLEMS

- -Identification of records
- -Screening
- -Clinical assessments
- -Focus on J&P, tap into BE, understand RC
- -Accurately detect the presence of Parkinson's disease in an individual by applying the necessary algorithm.

## 9. PROBLEM ROOT CAUSE



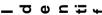
- -Lack of study and insufficient data
- -New to environment

#### 7. BEHAVIOUR



The XGBoost algorithm used for detecting Parkinson's disease incorporates a sparsity-aware split finding algorithm to handle different types of sparsity patterns in the data.Out-of-core computing feature of the XGBoost algorithm optimizes the available disk space and maximizes its usage. The data is loaded, get the features and labels, scale the features, then split the dataset, build an XGBClassifier, and then calculate the accuracy of our model.

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#### 3. TRIGGERS



- -Providing a more precise, accurate and early prediction of the disease in an efficient way.
- -Parkinson's remedy is expensive and hence if the ailment is detected in a preliminary degree, cost will be lowered and the patient's life is saved.

### 4. EMOTIONS: BEFORE / AFTER



## Before:

-Uncertain about outcome of prediction -Drained emotionally and physically

## After:

-Feeling relaxed and at ease after the prediction results and its accuracy -Sure and certain about the prediction and to take necessary medications

#### 10. YOUR SOLUTION



-The project aims at presenting a solution for Parkinson's disease detection using the Python libraries scikit-learn, numpy, pandas, and xgboost.

- -We'll load the data, get the features and labels, scale the features, then split the dataset, build an XGBClassifier, and then calculate the accuracy of our model.
- -The main idea behind the implementation is to classify a person as Healthy or having Parkinson's disease by building a model using XGBoost.

## 8. CHANNELS of BEHAVIOUR



# 8.1 Online:

-Data is secured and stored onto cloud storage

# 8.2 Offline:

-To seek for prediction reports and ask queries about results or others