 **Detecting Parkinson’s disease using Machine Learning** - PNT2022TMID06357

**Explore AS, differentiate**

**Focus on J&P, tap into BE, understand RC**

**Deﬁne CS, ﬁt into CC**

**Focus on J&P, tap into BE, understand RC**

* Customers who are affected by Parkinsons Disease.
* Customers who feel or doubt that they might have Parkinsons Disease

**AS**

**5. AVAILABLE SOLUTIONS**

Which solutions are available to the customers when they face the problem

What constraints prevent your customers from taking action or limit their choices

of solutions? i.e. spending power, budget, no cash, network connection, available devices.

**CC**

**6. CUSTOMER CONSTRAINTS**

**CS**

**1. CUSTOME SEGMENT(S)**

Who is your customer?

i.e. working parents of 0-5 y.o. kids

* The existing solution does not provide the exact accuracy of affected people.
* Using the ML approaches various classifiers produce various results.
* Previously before in the primary method the detection of the Parkinsons disease cannot be found without the help of Doctors.

i.e. directly related: ﬁnd the right solar panel installer, calculate usage and beneﬁts; indirectly associated: customers spend free time on volunteering work (i.e. Greenpeace)

**BE**

**7. BEHAVIOUR**

What does your customer do to address the problem and get the job done?

**RC**

**9. PROBLEM ROOT CAUSE**

What is the real reason that this problem exists? What is the back story behind the need to do this job?

i.e. customers have to do it because of the change in regulations.

**J&P**

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

Which jobs-to-be-done (or problems) do you address for your customers? There could be more than one; explore different sides.

* Our project helps the customers to detect Parkinson’s disease in the early stage and the exact percentage affected by the disease can be viewed
* Our goal for the customers is to quantify the visual appearance of the spiral and wave datasets using machine learning approaches.
* Start using the predictor for accurate results.
* Making sure they do not have any of the symptoms listed in the ML web application.
* Enter their symptoms so as to find whether they have the disease or not.
* No proper knowledge or awareness about the seriousness of the disease.
* There aren’t any proper clinically proven methods to diagnose the disease at an early stage.
* Helps in early detection of the disease using ML approaches.

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| **Identify strong TR & EM** | **3. TRIGGERS TR**  What triggers customers to act? i.e. seeing their neighbour installing solar panels, reading about a more efﬁcient solution in the news.   * They will be able to understand themselves and about the disease using the ML web application. | **10. YOUR SOLUTION SL**  If you are working on an existing business, write down your current solution ﬁrst, ﬁll in the canvas, and check how much it ﬁts reality.  If you are working on a new business proposition, then keep it blank until you ﬁll in the canvas and come up with a solution that ﬁts within customer limitations, solves a problem and matches customer behaviour.   * Develop a ML-based detector that uses predict log probability function by random forest classifier. * A detector that will accurately give the percentage affected in the individual using the datasets provided. | 1. **CHANNELS of BEHAVIOUR CH**     1. **ONLINE**   What kind of actions do customers take online? Extract online channels from #7   * They will use the existing detectors that will only say whether they have Parkinson’s disease or not but not the exact percentage affected.   1. **OFFLINE**   What kind of actions do customers take ofﬂine? Extract ofﬂine channels from #7 and use them for customer development.   * They visit clinics to check whether they have the disease or not. | **Extract online & ofﬂine CH of BE** |
| **4. EMOTIONS: BEFORE / AFTER EM**  How do customers feel when they face a problem or a job and afterwards?  i.e. lost, insecure > conﬁdent, in control - use it in your communication strategy & design.   * Before, the individual will be in a dilemma on whether they have Parkinson’s disease or not. * After using the ML web application, they will be able to know whether they have the disease or not. |