Problem-Solution fit canvas 2.0

Parkinson's Disease Detection using machine learning

DefineCS, fitintoCC

1.CUSTOMERSEGMENT(S) `CS`

Whoisyourcustomer?
i.e.workingparentsof0-5y.o.kids

- Person who are affected by progressive neurodegenerative disorder.
- People above the age of 60 are mostly affected.
- Mainly used by Doctors for testing the accuracy of Parkinson's Disease.

6.CUSTOMERCONSTRAINTS `CC`

Whatconstraintspreventyourcustomersfromtakingactionorlimittheirchoices
ofsolutions?i.e.spendingpower,budget,nocash,networkconnection,availabledevices.

- Users Need to have a proper network connectivity.
- They need to show interest towards taking test.
- They Need either a mobile or a desktop.

5.AVAILABLE SOLUTIONS `AS`

Whichsolutionsareavailabletothecustomerswhentheyfacetheproblem
orneedtogetthejobdone?Whathavetheytriedinthepast?Whatpros&consdothesesolutionshave
?i.e.penandpaperisanalternativetodigitalnotetaking

- Prediction using sensors.
- Prediction using uploading of spiral and wave images drawn by Patients.
- Prediction using speech.

ExploreAS, differentiate

Focus onJ&P,tapintoBE,understandRC

2.JOBS-TO-BE-DONE/PROBLEMS `J&P`

Whichjobs-to-be-
done(orproblems)doyouaddressforyourcustomers?Therecouldbemorethanone;explo

- Customer have to upload their spiral and wave diagrams to detect their state and accuracy of the disease.
- It also help us to detect whether person is healthy or unhealthy.
- Customers have to just sign-in and upload their documents and get results.
- Early detection helps the customer to suggest meditation for recovery of patients.

9.PROBLEM ROOT CAUSE `RC`

- Certain nerve cells (neurons) in the brain gradually break down or die.
- Due to a loss of neurons that produce a chemical messenger in your brain called dopamine.
- Decrease in dopamine level causes atypical brain activity, leading to impaired movement and other symptoms.

7.BEHAVIOUR `BE`

- User Need to contact the doctor for further treatment if they face severe issues.
- Need to find the way to reduce the power of the disease.
- Need to talk to their family and friends about the diagnosis and ask for general help.

Focus onJ&P,tapintoBE,understandRC

IdentifystrongTR&EM

3.TRIGGERS `TR`

Whattriggerscustomerstoact?i.e.seeingtheirneighbourinstallingsolarpanels,r
eadingaboutamoreefficientsolutioninthenews.

- Customers should be provided with awareness through advertisements.
- Social awareness about the disease should be

4.EMOTIONS:BEFORE/AFTER `EM`

Howdocustomersfeelwhentheyfaceaproblemoraiobandafterwards?

- Before: Patients may feel anxious, stressed, depressed, tremors.
- After : Patients can perform action without any ones help, walk steadily, etc.

10.YOUR SOLUTION `SL`

- It is observed that the affected persons can't able draw correctly. So the user need to upload the images of drawn spiral and waves.
- Using Histogram of Oriented Gradients for Human Detection (HOG), a structural descriptor that measures variations in local gradient in the input image, the picture will be quantified.
- Random Forest classifier is used to detect Parkinson's disease in hand-drawn images of spirals and waves.

8. CHANNELS of BEHAVIOUR `CH`

8.1 ONLINE

- People can able to access the website anywhere at anytime.
- It is cost-effective production to check the condition of patients in online.

8.2 OFFLINE

- Get appointment and meet doctors for report analysis.
- In-person analysis can be taken.

Extractonline&offlineCHofBE