

Project Design Phase-I - Solution Fit

Project Title: Early Detection of Chronic Kidney Disease using Machine Learning

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Define CS, fit into CC		Focus on J&P, tap into BE, understand RC	
1. CUSTOMER SEGMENT(S) Who is your customer? Doctors who felt difficulties in finding the presence of chronic disease quickly using the report of patient	CS	2. JOBS-TO-BE-DONE / PROBLEMS Which jobs-to-be-done (or problems) do you address for your customers? To predict and detect the presence of chronic disease using the patient report	J&P
6. CUSTOMER CONSTRAINTS What constraints prevent your customers from taking action or limit their choices of solutions? By using the web application which inbuilt using machine learning model makes easy to find the presence of chronic disease instantly	CC	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? Because there is a delay in analysing each patient report and detecting the presence of disease by using doctors manually in a quick manner.	RC
5. AVAILABLE SOLUTIONS Which solutions are available to the customers when they face the problem or need to get the job done? There are solution models available with different algorithms. Here we have used ensemble technique to build the model and created a web application using flask connectivity	AS	7. BEHAVIOUR What does your customer do to address the problem and get the job done? They can simply login to our web application and use our chronic disease prediction model in a user friendly interface	BE
Explore AS, differentiate CS		Focus on J&P, tap into BE, understand RC	
TRIGGERS		10. YOUR SOLUTION	
TR What triggers customers to act? They need to travel to hospital and wait for a long time to visit doctors to check whether they have chronic disease or not.		SL We have collected dataset from kaggle. After doing preprocessing, we have developed both regression and classification model. Regression model is built with RandomForestRegressor and classification model is built with RandomForestClassifier. The finally our model is fit with html pages to have good user interface. This was connected using Python flask web framework.	
8. CHANNELS of BEHAVIOUR		CH 8.1 ONLINE What kind of actions do customers take online? Customers need to enter their details in our web frame work to get final results in online 8.2 OFFLINE What kind of actions do customers take offline? The need to have their medical report details.	