**SOFTWARE ENGINEERING**

**CSE- 3001 PROJECT**

**COMPONENT SUBMITTED TO :- PROF. GAYATHRI A**

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**SMART HEALTH CARE SYSTEM**

**PROBLEM STATEMENT**

When you go to any doctor, what is the first thing he or she will ask you?

Questions are as follows: What is your medical history regarding this disease. Or what treatments did you undergo earlier? What were the medicines given to you earlier?

People like us tend to lose their earlier prescription and older medical record. This carelessness can be the reason for bad treatments by the doctor. So, we provide an easy way for every patient to record their medical history on our platform. Just say it and your personal assistant will do it for you.

**What do we mean by assisting doctors?**

For those doctors who might need a second brain to ensure that the diagnosis of disease is 100% correct, we present an AI based medical voice assistant who can verbally interact with doctor/informal practitioners and can help him or her with the diagnosis process. This predictive voice assistant should be able to pick the illness of patient with a confidence score to back it up. Such kind of system can help doctor and patients both.

Suppose you got a blood test done. Now you want to check if you have diabetes or not. For this you can either go to a doctor or simply feed the readings of the report to our AI bases smart bot. Smart bot with its machine learning algorithm can tell you whether or not you have diabetes.

No machine right now can replace a doctor. But for those who are looking for some extra help and medical assistance, our model is just fine.

For anyone looking forward to buy a medicine, he or she can order medicine from netmeds using our voice assistant. This kind of connectivity can prove to be very beneficial for developers and software users.

**SOFTWARE DESIGN DOCUMENT**

The scope for this project includes everything medical practice field needs to replace their current system with our system in addition to a couple of extra features. **The scope primarily consists of three parts, the database, the Doctor’s interface and the Patient Interface.** The three of those parts each have a distinct scope. A huge part of this involves scanning and storing documents on a per patient basis. Each document may have different pieces of data that need to be tracked in the database. The database will be in charge of keeping track of what pieces of data each document is associated with as well as storing each instance of that data that has been input. The Doctor’s Interface is as follows.

**There will be an application connected to the hospital server to access the database. A chatbot helps doctor write a prescription and helps him to identify what issue the patient might be facing based on the issue, the symptoms and related diseases are stored as a separate table in the database**.

The Patient interface is the primary Interface, and the patient can login to identify what issue he might be facing in case he is unable to have medical access, which yields result based on the symptoms he enters along with their probability of occurrence. Additionally, the system transmits the data to the doctor in a scenario where the issue is serious.

**PROCESS MODEL**

We will use the **incremental model** for software development as I have my projects requirements clear, like I have **4 modules to work on which are The Login and signup** module which also has the overall GUI for the software, **Doctor’s side(chatbot module to assist his tasks)**, the **patient record** module( which stores the past medical records) and the **medicine prediction module to help oblivious patients**. Moreover, all these options are independent of each other and I can prioritize the requirements (increments) to be delivered orderly.

This also has Lower risk of failure for overall project because I can deliver each increment one by one to the customer. And in each increment, I go with waterfall model because every requirement is clear in each increment (which is mentioned above). Also customer would not want to wait for completing the project.