Basic Details of the Team and Problem Statement

Organization Name : Government Of Kerala

PS Code : SIH1325

Problem Statement Title : AI Assisted Tele-medicine KIOSK for Rural India

Team Name : Techexagon

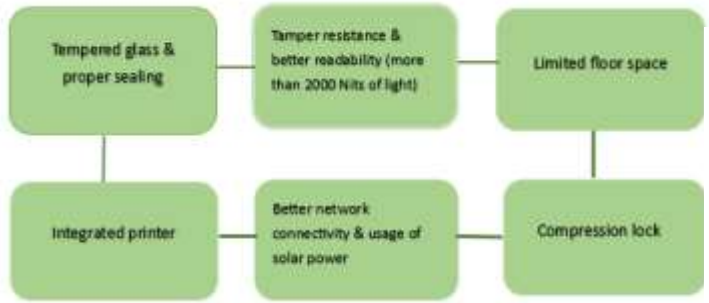
Team Leader Name : Claribel Hermia P

Institute Code (AISHE) : C-25006

Institute Name : Saranathan College of Engineering

Theme Name : Agriculture, Foodtech & Rural Development

Idea/Approach Details



The AI-assisted telemedicine robotic Kiosk that can be installed anywhere in the village can provide the simple availability and access to qualified doctors, depending on the individual's or patient's medical condition.

- **Patient's fingerprint gets recognised by the biometric device connected to Aadhaar and the data's like mobile number and regional language gets extracted.**
- **The IR camera included within the kiosk records the patient's temperature and displays it.**
- **Voice assistant helps gathering and storing patient's symptoms that automatically fill in.**
- **The voice assistant asks additional pertinent questions and automatically chooses the regional language by default along with the responses received.**
- **Patients receive the printed version of the e-prescription via a thermal printer, followed by the visit with a doctor using a token ID produced by SMS based on the availability of physicians.**
- **Software that is cloud-based can be remotely updated and maintained.**
- **In addition ,SOS button alerts the nearby hospitals and contacts the emergency numbers in the case of an emergency.**
- **Utilising solar energy here increases energy efficiency and is practical during blackouts.**

Technology stack :

TECHNOLOGY	USAGE
Selenium Module	Efficiently scrapes data from website and allows automation.
AI Speech Recognition	Obtaining voice input from the user in their regional language.
Corpus Similarity Module	Process Regional Language and feeds the processed data to the AI for automation.
gTTS module	Provides AI the ability to converse in multiple languages.
Google Cloud	Preserving the patient's name, phone number, arrival time and other information related to their visit.

Idea/Approach Details

Use cases:

User Case	AI-assisted Tele-Medicine Kiosk For Rural India
Actors	Human Being
Preconditions	(1) Patient must have a registered account in E-Sanjeevani app. (2) Patient must have updated his/her biometrics linked in Aadhar. (3) Patients must bring their mobiles.
Main Flow	(1) User places his/her biometry then the AI traverses through the website along with the user and generates a token. (2) The user then makes a doctor video call consultation using the token. (3) Then a thermal printer prints out the prepared electronic prescription.
Postconditions	The local ASHA representative receives the prescription and delivers the medication free of charge.
Non-functional Requirements	Maintainability , Usability , Security.

Dependencies:

- **Linkage of aadhar with the biometric.**
- **Active mobile number in aadhar to get the OTP and consultation ID.**
- **First step registration has to be done before hand in E-Sanjeevani app.**
- **Proper network connectivity.**

Show stoppers:

- **Emergency cases can't be dealt.**
- **Failure of network.**
- **Blind people with unrecognizable fingerprints will have trouble in using the system.**

Team Member Details

Team Leader Name : Claribel Hermia.P

Branch : B.E | Stream : CSE[AIML] | Year : II

Team Member 1 Name : Sankaranarayanan .M

Branch : B.E | Stream :CSE[AIML] | Year : II

Team Member 2 Name : Sivakumar .B

Branch : B.E | Stream :CSE[AIML] | Year : II

Team Member 3 Name : Sandeep Prakash.R

Branch : B.E | Stream :CSE[AIML] | Year : II

Team Member 4 Name : Srinithi . A

Branch : B.E | Stream :CSE[AIML] | Year : II

Team Member 5 Name : Hingsly Priya .R

Branch : B.E | Stream :CSE[AIML] | Year : II

Team Mentor 1 Name : MS. M. Padmapriya

Category : Assistant professor,CSE [AIML],SCE. | Expertise :Machine Learning | Domain Experience (in years):5

SIH1325-AI Assisted Tele-medicine KIOSK for Rural India

PROJECT APPROACH:

Rural Indian health care is still a problem that needs to be tackled in an efficient way. The AI-assisted telemedicine robotic Kiosk that can be installed anywhere in the village can provide the simple availability and access to qualified doctors, depending on the individual's or patient's medical condition. Through the biometric scanner, individuals can mark their identities. The voice assistant that has been implemented will inquire the person about their illness. Through the e-sanjeevani App, the person will later be directed to an expert doctor online. Following the consultation, the local Asha worker can promptly provide them with medications and other related services at free of cost.

PROJECT ABSTRACT:

Patient’s fingerprint gets recognised by the biometric device connected to Aadhaar and the data's like mobile number and regional language gets extracted.The IR camera included within the kiosk records the patient’s temperature and displays it.Voice assistant helps gathering and storing patient’s symptoms that automatically fill in.The voice assistant asks additional pertinent questions and automatically chooses the regional language by default along with the responses received.Patients receive the printed version of the e-prescription via a thermal printer, followed by the visit with a doctor using a token ID produced by SMS based on the availability of physicians.Software that is cloud-based can be remotely updated and maintained.In addition ,SOS button alerts the nearby hospitals and contacts the emergency numbers in the case of an emergency.Utilising solar energy here increases energy efficiency and is practical during blackouts**.**And also the proposed system can be accessed in their own regional language**.**Autoselection and filling make it easier for the unschooled in rural areas**.**Saves time by skipping the commute and waiting room ,Improves Efficiency**.**Follow-up consultations can be done from time to time.