SMART INDIA HACKATHON 2023

Basic Details of the Team and Problem Statement

Ministry/Organization Name/Student Innovation: Government of Kerala

PS Code: SIH1325

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

Team Name: MEd Coders

Team Leader Name: Sudhanshu Kumar

Institute Code (AISHE): U-1080

Institute Name: C. V. Raman Global University, Bhubaneswar, Odisha

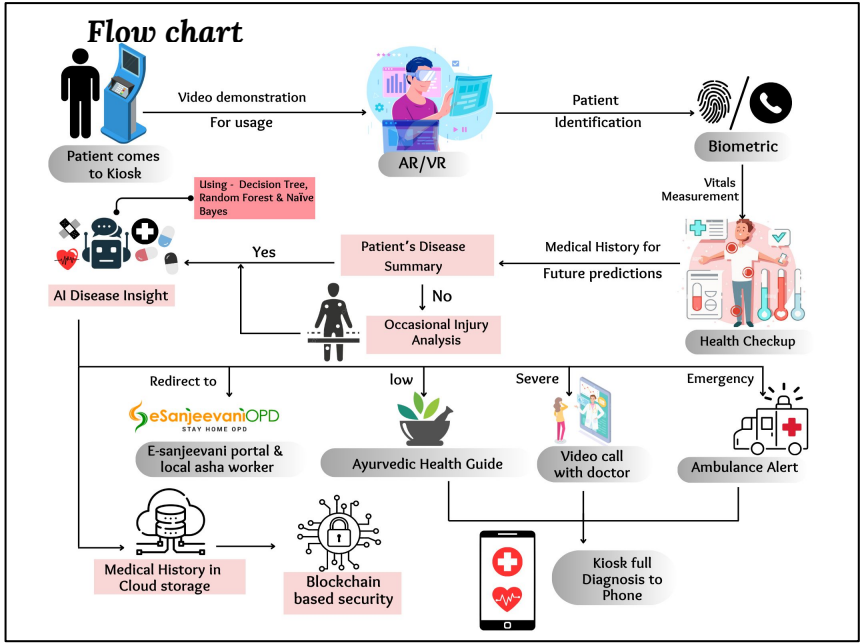
Theme Name: Agriculture, Food-Tech & Rural Development

Idea/Approach Details

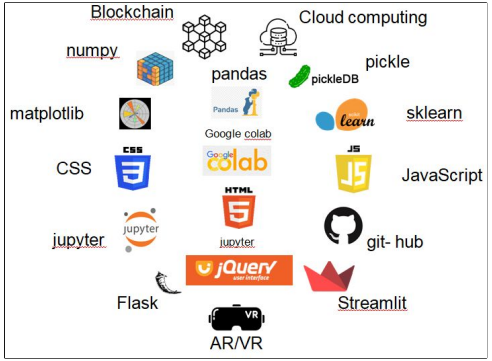
Idea/Solution

- *The Kiosk is available in most of the* ***regional languages*** *making it* ***multilingual.***
- ***Biometric*** *verification via phone no. or fingerprint.*
- ***Machine Learning*** *algorithms can be used to improve the accuracy of symptom analysis, image recognition and continuous improvement in* ***diagnosis.***
- ***Medical history*** *is stored in* ***cloud*** *future use which can be shared to all authorized hospitals.*
- ***AI interaction*** *with users to gather information about their health issues.*
- *Facilitate* ***appointments with doctors*** *via the e-sanjeevani App.*
- ***IoT sensors*** *can measure vital signs like blood pressure and glucose levels and can help in remote analysis.*
- *Dispensation of* ***Ayurveda*** *medications.*
- *Although still in infancy,* ***quantum computing*** *has the potential for advanced data analysis and encryption that can benefit your kiosk's security and processing capabilities.*
- ***Edtech*** *solutions can be integrated into the kiosk to provide educational content on health issues.*
- ***Strong Blockchain Cybersecurity*** *system to protect patients' data.*

Flow chart



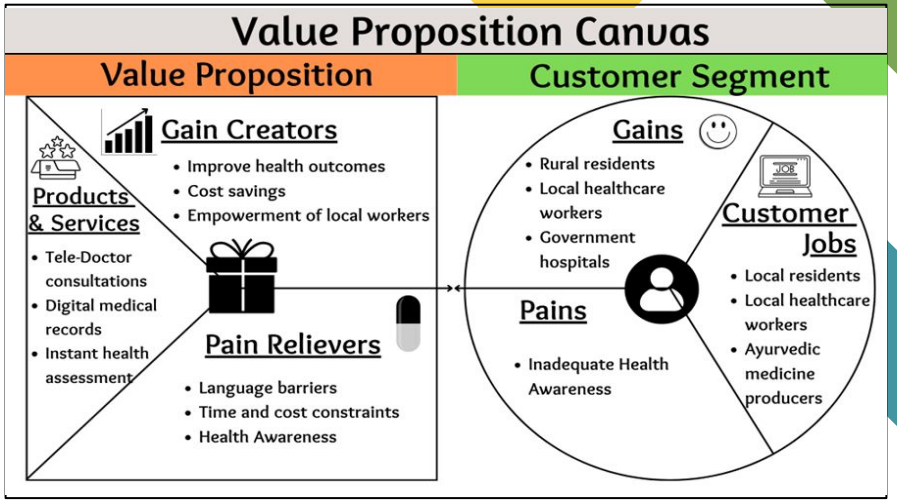
Technology Stack



Idea/Approach Details

Use Cases

- The KIOSK **retrieves the user's past medical records to share them with authorized hospitals or doctors.**
- **Eco-friendly power solutions**, such as solar panels for **uninterrupted operations** in areas with unreliable power.
- It can **create job opportunities for locals** as operators, technicians, and community health workers, **contributing to rural development.**
- In India **4.5 crore people travel** daily via flights, trains, and buses. Setting up kiosks in these locations, with just **1% daily usage** at a minimum charge of **Rs. 10 per use**, could generate approximately **10 crores in monthly income.**

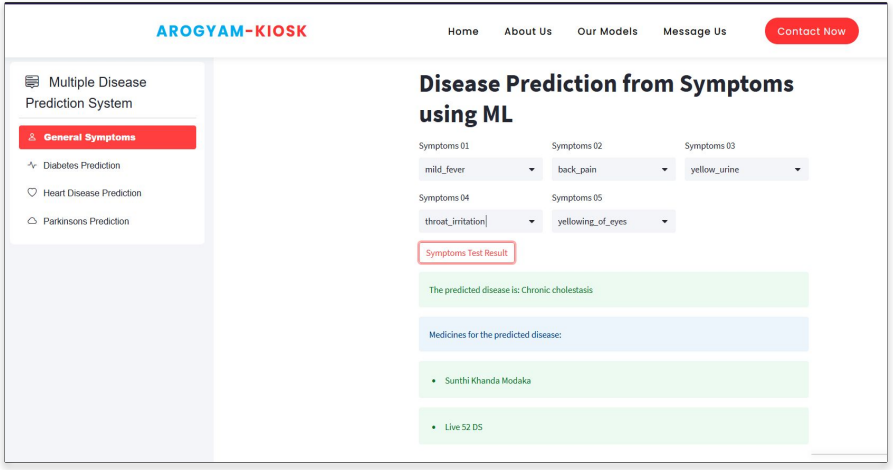


Dependencies/Showstopper

- *Kiosk hardware with a computer.*
- *Reliable internet access*
- *Integration with the e-sanjeevani App*
- *and telemedicine platforms for remote consultations.*

Outcomes & Impact

- *Bridging the gap between doctors and rural people.*
- *Improved healthcare and awareness in villages.*



Team Member Details

Team Leader Name: Sudhanshu Kumar

Branch (Btech/Mtech/PhD etc): Btech | Stream (ECE, CSE etc): CSE | Year (I,II,III,IV): III

Team Member 1 Name: Ankur Kumari

Branch (Btech/Mtech/PhD etc): Btech | Stream (ECE, CSE etc): CSE | Year (I,II,III,IV): III

Team Member 2 Name: Aniketa Das

Branch (Btech/Mtech/PhD etc): Btech | Stream (ECE, CSE etc): CSE | Year (I,II,III,IV): III

Team Member 3 Name: Aman Ujwal Toppo

Branch (Btech/Mtech/PhD etc): Btech | Stream (ECE, CSE etc): CSE | Year (I,II,III,IV): III

Team Member 4 Name: Riya Pati

Branch (Btech/Mtech/PhD etc): Btech | Stream (ECE, CSE etc): CSE | Year (I,II,III,IV): III

Team Member 5 Name: Himanshu Kumar Singh

Branch (Btech/Mtech/PhD etc): Btech | Stream (ECE, CSE etc): CSE | Year (I,II,III,IV): IV

Team Mentor 1 Name: Dr. Tusar Kanti Dash

Category (Academic/Industry): Academic | Expertise (AI/ML/Blockchain etc): Speech Processing | Domain Experience (in years): 17

Team Mentor 2 Name: Dr. Surendra Kumar Nanda

Category (Academic/Industry): Academic | Expertise (AI/ML/Blockchain etc): Machine Learning | Domain Experience (in years): 15