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: Jan-Sanjeevani

Team Leader Name: Rishabh Agrawal

Institute Code (AISHE):

Institute Name: SRM Institute of Science and Technology

Theme Name: Agriculture, FoodTech & Rural Development

Problem Statement : The proposal suggests tackling rural healthcare challenges in India using AI-assisted telemedicine kiosks. These kiosks, located in villages, grant convenient access to expert doctors. Patients establish their identity via biometric scans and discuss their medical concerns with the kiosk robot. The kiosk then links them to experienced physicians via the e-sanjeevani App for remote consultations. After consultations, patients receive prescribed medicines and services through local Asha workers, ensuring prompt healthcare access.
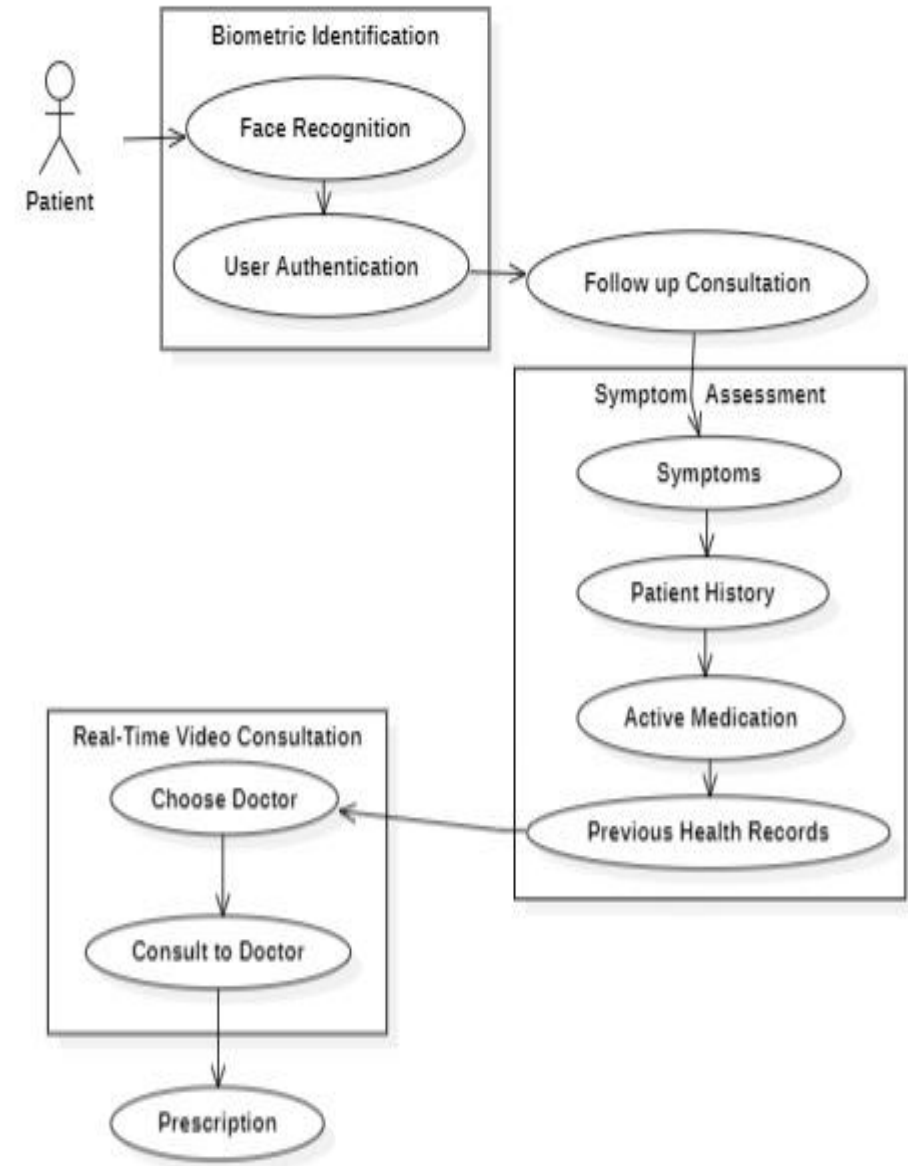
Idea/Approach Details

Describe your idea/Solution/Prototype here:

- Physical Kiosk Design: A durable kiosk with a touchscreen, biometric scanner, camera, microphone, and medication dispenser.
- Software Interface: User-friendly touchscreen with multilingual support, AI-driven symptom assessment, telemedicine integration, and electronic health record management.
- User Interaction: Touchscreen initiation, biometric authentication, symptom assessment, video consultations, and local healthcare worker assistance.
- Medication Dispensing: Confirmation via touchscreen, accurate medication dispensing, and secure storage.
- Payment and Record Keeping: Payment support via touchscreen and secure electronic health record storage.

Describe your Technology stack here:

- Platform independent, maintainable web-based solution
- Multilingual speech interactions using state-of-art cloud AI
- Biometric authentication using established browser solutions
- Seamless client-side integration with eSanjeevani, no upstream changes required
- Real Time Face-to-Face patient-doctor interaction leveraging e-Sanjeevani infrastructure
- Multi-factor security using biometrics

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Idea/Approach Details

Describe your Use Cases here

- "Biometric Identification for Secure Access"
- "Symptom Assessment and Data Collection"
- "Real-Time Video Consultation"
- "Medication Dispensing and Instructions"-> The kiosk dispenses prescribed medications and provides clear dosage instructions.
- "Local Healthcare Worker Support" -> Local healthcare workers assist users in using the kiosk and understanding prescriptions.
- "Payment and Affordability"-> Users can make payments for services through various means, including digital wallets and subsidies.
- "Electronic Health Records (EHR)"-> The kiosk maintains electronic health records for patient history and doctor reference.
- "Community Engagement and Awareness" ->Local authorities and NGOs conduct awareness campaigns to educate residents about the kiosk's availability and benefits.

Describe your Dependencies / Show stopper here

- Infrastructure, Connectivity and Integration with Existing Healthcare Systems
- Technical Challenges
- Regulatory Compliance
- Privacy and Data Security
- User Education and Medical Accuracy
- Acceptance, Trust and Scalability

Implementation done as of now

- Biometric authentication for registration/login using face recognition
- Grant access to the user upon successful authentication.
- Navigate to the eSanjeevani portal for telemedicine services.
- Record the user's complaints or medical concerns.
- Access and review the user's medical history.
- Check the user's current medications.
- Retrieve and update the patient's medical records.
- Allow the user to ask questions or seek medical advice.
- Provide options for selecting a healthcare professional.
- Receive prescribed medications or treatment plans from the doctor.

Team Member Details

Team Leader Name: Rishabh Agrawal

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

Team Member 1 Name: Aayushi Agarwal

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

Team Member 2 Name: Falguni Rakhecha

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

Team Member 3 Name: Pritesh Agrawal

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Team Member 4 Name: Shashwat Ganesh

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

Team Member 5 Name: Trishita Paul

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

Team Mentor 1 Name: Dr. Kishore Anthuvan Sahayaraj K

Category (Academic/Industry): Academic   Expertise (AI/ML/Blockchain etc): Computer Vision, Machine Learning   Domain Experience (in years): 13 Years