RuralEdge

Digital Health, Education at the Rural Edge

Committers: Surojit Banerjee, Biswajit De
Treating the last “patient” on the digital lane

› 600K HealthCare workers
› No Digital Aid
   › Low Internet Bandwidth
   › No Internet No Apps
› Basic resources are not available

› 850 Million in Rural India
› 1 Doctor per 1497 person
Educating the last “student” on the last mile: For all age and stage
Giving Edge to the last mile: Lean-Green-Smart Network

Proof of Concept
10 Tribal Villages
45 Km from nearest City
Partner: BSNL in remote zones
Video to Edge to (Different) Video

1. Convert Input Video to “edges”
2. Use “edges” Video in Video Conference used in LMS & Tele-Health platform
3. Convert “edges” Video to output Video

1. Work in extreme low bandwidth
2. Allows removal of environmental distractions
3. Privacy Blocks
4. Levels the playing field
5. Mental health Counselling
BP Family: Tami COVID-19

Purpose/Features:
- ML Audio/Video Enhancements using GAN
- Tele-Health, and LMS on the edge.
- Control plane on the cloud
- Media plane close to customer site such as MEC servers in telco central offices.

Use cases & Applications
- Video Processing: Enhance Engagement Quality, Augment Video with information, Create Virtual environment, Transcribe engagements
- Telehealth: Appointment Scheduling, Payment Processing, Electronic Health Records
- Gamification: Reinforce Corrective Behavior, Track Progress, Generate Trends
- Learning Management System: AI Teacher Assist, Early Progress Prediction
Validation and Engagement

Track E. Developing new ways to deliver care in a COVID-19 and post COVID-19 world

Vaccinatelandia
- Problem: How to facilitate safe delivery of vaccines to large populations of India during and post pandemic?
- Solution: A digital platform to track vaccine record-keeping, reminder, scheduling and inventory management

SIPPE
- Problem: Frequent healthcare workers face a daily challenge to stay in the personal protective equipment (PPE) for a longer duration due to exhaustion caused by profuse sweating and discomfort.
- Solution: An alteration to the current personal protection equipment (PPE) used in the current pandemic of COVID-19 giving a physiological comfort to the front line workers.

ASHA ki Kiran
- Problem: Overworked community workers cannot deliver optimal healthcare in rural India.
- Solution: Leveraging on-ground communication tech to optimize and enable community workers to deliver effective care through real-time patient monitoring and triage of health problems in rural India to reduce on-field burden.

Our Team

Dayalbagh Educational Institute

Smart Gaon Foundation
Journey so far

- MIT Hackathons Facilitate Essential Goods Delivery to Elderly
- MIT COVID 19 Challenge Winner
- Partnership with DEI Secured Video app for Doctors
- Working with Akraino Edge
- docs@home TAMI COVID 19 Blueprint RuralEdge
- Exploring ways to work with Smart Gaon Foundation in 100s of Indian Villages

And Road ahead

- RuralEdge 1.0 LMS + Video Bridge
- RuralEdge 2.0 Docs@Home on EDGE
- RuralEdge 3.0 AI Assist for Teachers
- RuralEdge 4.0 AI Assist for Doctors (Curated Information)
- RuralEdge 5.0 Interoperability with major providers like EPIC, Google Classroom, Zoom

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