# **Report on Raj Reddy Center for Technology and Society (RCTS), IIIT-H**

## **1. Introduction**

The **Raj Reddy Center for Technology and Society (RCTS)** was established at IIIT Hyderabad to honor Prof. Raj Reddy’s vision of applying technology for the benefit of society. The center focuses on developing **scalable, impactful, and sustainable technology solutions** that can bridge the gap between urban and rural communities in areas such as **education, healthcare, and livelihoods**.

## **2. Current Work at RCTS**

### **A. Education Initiatives**

* **Gamified Learning Tools** – Developing interactive, mobile-based apps to help rural students learn core subjects.
* **English Pronunciation Feedback Tool** – AI-powered app to improve spoken English in villages.
* **Remote Labs** – Tools for practical science education without needing physical labs.
* **Gifted Student Support** – Collaborations with NGOs (e.g., Pravaha Foundation) to identify and nurture rural talent.

### **B. Healthcare & Nutrition Initiatives**

* **Oral Cancer Screening Tool** – AI-based detection methods in partnership with cancer foundations.
* **AI for Anemia Detection** – Screening of mothers and infants for anemia using smartphone-based AI.
* **IoT Asset Tracking** – Monitoring medical equipment usage in rural hospitals.
* **Malnutrition Detection** – Funded AI vision project to detect malnutrition in children from photos.

### **C. Livelihood and Rural Empowerment**

* Engagement with local communities to explore **digital agriculture**, skill development, and resource management.
* Hosting **roundtable discussions** to include NGOs, government, and tech experts for collaborative problem-solving.

## **3. What RCTS *Should Do* (Recommendations)**

### **A. Expand Scope in Education**

1. **Multi-language Learning Tools** – Extend current tools beyond English to regional languages (Telugu, Hindi, Kannada, etc.).
2. **AI Tutors for Rural Schools** – Deploy low-cost AI chatbots for students to practice problem-solving and get instant help.
3. **Digital Curriculum Libraries** – Provide free access to curated content, textbooks, and open-source educational resources.

### **B. Strengthen Healthcare Projects**

1. **Telemedicine with AI Diagnostics** – Build platforms where village health workers can connect to city doctors, supported by AI diagnostic tools.
2. **Preventive Health Monitoring** – Mobile apps that track nutrition, vaccination, and maternal health data.
3. **Low-cost Devices** – Focus on affordable hardware like smart stethoscopes and portable ultrasound devices for rural clinics.

### **C. Support Rural Livelihoods**

1. **Digital Agriculture Tools** – AI apps for predicting crop diseases, weather alerts, and fair market pricing.
2. **Skill Training Platforms** – Online platforms for rural youth to learn job-ready skills (IT, data entry, tailoring, etc.).
3. **Micro-entrepreneurship Support** – Technology platforms to connect rural artisans and farmers directly to markets.

### **D. Strengthen Sustainability & Scaling**

1. **Open-source Models** – Make tools open-source for NGOs and state governments to adopt widely.
2. **Community Training Programs** – Train local teachers, health workers, and volunteers to use the technology effectively.
3. **Monitoring & Evaluation** – Establish frameworks to measure the long-term impact of projects on education and healthcare outcomes.

## **4. Conclusion**

RCTS has made an **excellent start** in applying AI and technology to rural problems, particularly in healthcare and education. However, to create **deeper, long-term societal change**, the center should focus on:

* **Scaling solutions** across multiple states.
* **Building sustainable open platforms** accessible to NGOs and governments.
* **Expanding into livelihoods and agriculture** to directly impact rural income and well-being.

By adopting these directions, RCTS can **realize Prof. Raj Reddy’s vision** of leveraging advanced technology to reduce inequality and empower the most underserved communities in India.