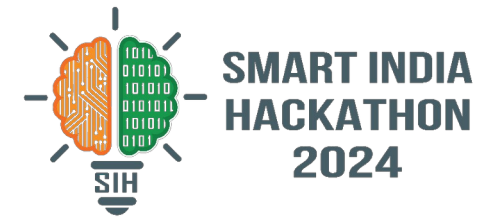# SMART INDIA HACKATHON 2024

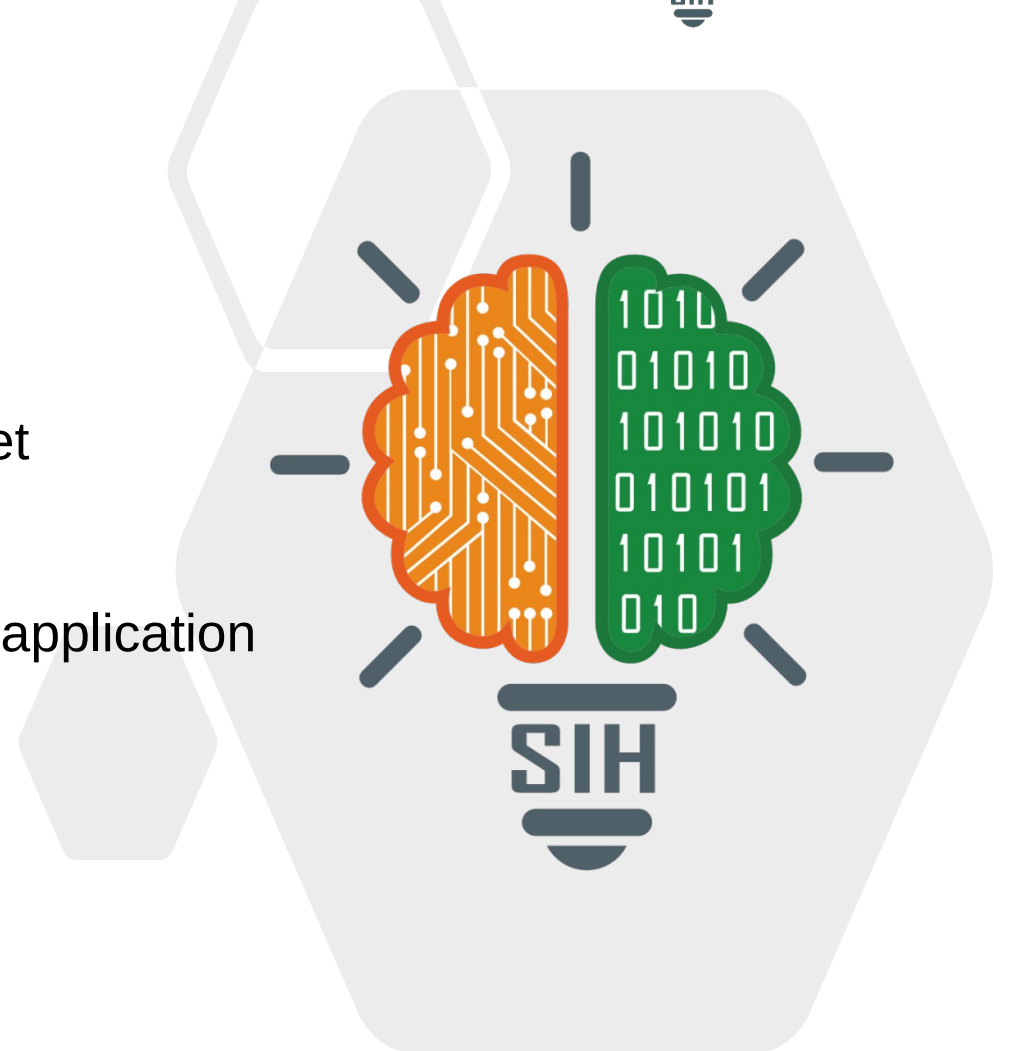
Problem Statement ID **-** SIH1637

Problem Statement Title - Mobile App for Direct Market
Access for Farmers

Theme - Multilingual Artificial Intelligence based Mobile application
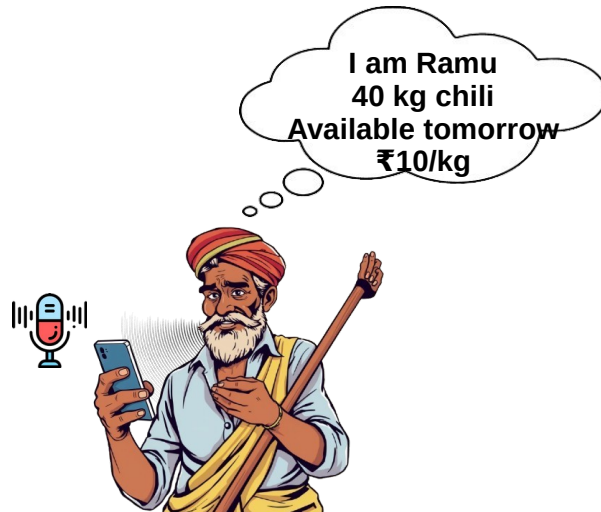
PS Category - Software

Team ID -

Team Name - ROOKIES

# AGRI-CONNECT

Proposed Solution

A **multilingual** Android and web application enabling farmers to upload produce details using **AI**-based **voice-to-text** and **Read a Loud** features, with **automated location-based navigation**, and an **ML**-driven **price prediction** model. The integrated **ML** model compares seasonal and local market prices to provide accurate pricing suggestions and **notifies** farmers about **high-demand** crops in the market by allowing **direct sales** to consumers with an integrated **payment gateway**, bypassing intermediaries.

Farmers can utilize the **Read Aloud feature** and **AI Voice-to-Text technology** to upload their data effortlessly. By **clicking the microphone**, this feature becomes active.

I am Ramu
40 kg chili
Available tomorrow
₹10/kg

Seasonal Price
Local Market
Product name

Price Prediction

Crop Trend

Quantity effect

ML

Sellers data

Demand locations

Transportation Cost

Weather conditions

Rookies

- Farmer taps the microphone icon to start the **Read Aloud** feature.
- **Voice-to-Text** captures each field as prompted, filling in the form in **real-time**.
- **ML** - based price prediction suggests profitable pricing based on local market trends.
- **Read Aloud** confirms all inputs by reading them back; farmer confirms the details.
- Location is **auto-captured** upon confirmation.
- Data is displayed to consumers for viewing and purchase.
- In-app **payments** facilitate transactions, with access to order history and stats for tracking and network growth.

Farmer Side
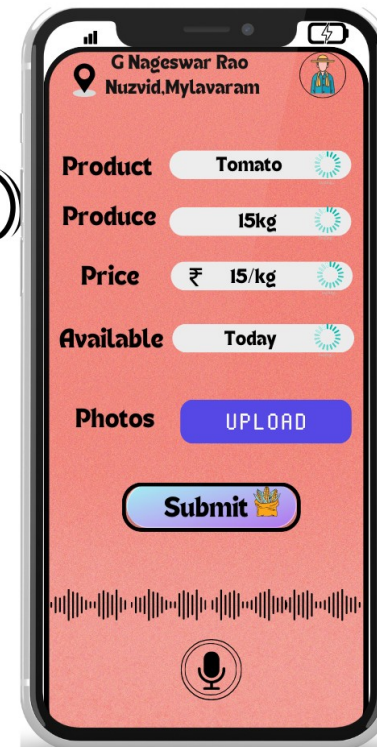
Consumer Side

FEASIBILITY AND VIABILITY
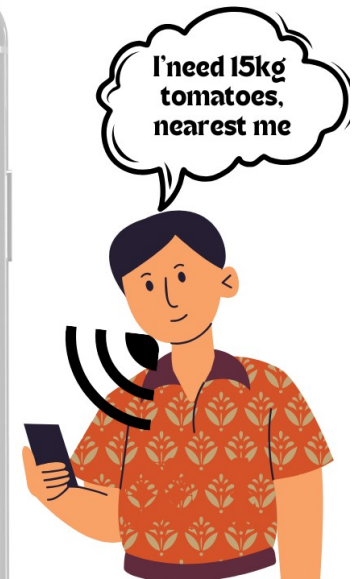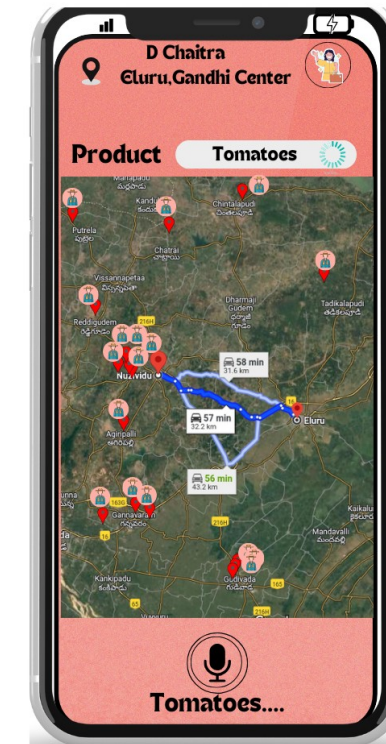
Feasibility of idea:

- Market demand for direct farmer-to-consumer sales.
- High mobile penetraction in rural areas.
- Simple **UI/UX** targeted at users with low tech literacy.
- Integrating a voice call feature, **AI** voice to text .
- Price negotiation and addressing middlemen exploitation.
- Empowering **trust** and **confidence** building for farmers
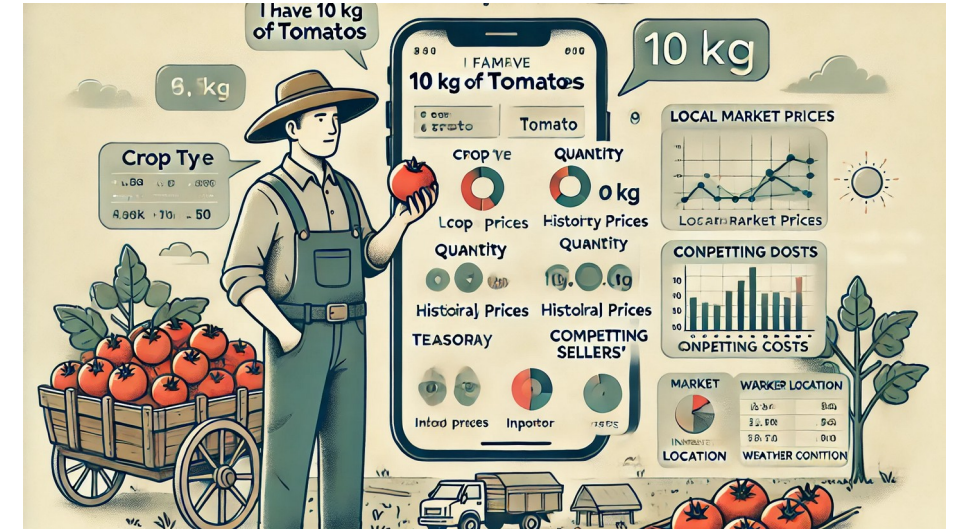
Potential challenges and risks:

- Lack of digital literacy among farmers.
- Logistics and delivery network.
- Price Volatility and Market Competition
- Trust and Payment Security

Strategies for overcoming challenges :

- Training and awareness programs for farmers.
- Partnerships with local delivery services.
- Collaborate with agricultural organizations.
- Price monitoring and support
- Secure payment gateway

IMPACT AND BENEFITS

Potential impact on target audience :
- Improves economic conditions by eliminating intermediaries.
- Enhanced **income** for farmers.
- **Improved market** access.
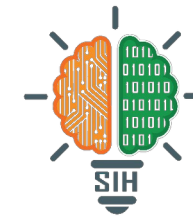- Community Building for Farmers and Buyers

Benefits of the solution :
- Social: Empowerment of farmers through direct sales, fostering trust and collaboration.
- Economic: Higher profit margins by eliminating middlemen.
- Environmental: Reduced food waste through efficient sales channels and transportation-related carbon foot prints. Encourages sustainable farming practices.

Environmental Disaster Relevance :
- The app aids farmers affected by **environmental disasters** by providing a platform to quickly sell surplus produce, **minimizing losses** and **reducing food waste**.
- It promotes resilience in farming communities by connecting them directly with buyers, allowing them to recover financially after adverse events.

RESEARCH AND REFERENCES

- https://www.thenewsminute.com/andhra-pradesh/tribal-cashew-farmers-ap-grapple-unfair-prices-exploitation-middlemen-179309
- https://www.civilsocietyonline.com/agriculture/from-city-lights-to-farms-and-forests/
- https://www.researchgate.net/publication/378470794_GLOBAL_AGRICULTURAL_LOSSES_AND_THEIR_CAUSES
- https://economictimes.indiatimes.com/news/economy/agriculture/view-why-do-indias-farmers-kill-themselves-can-market-reforms-help/articleshow/78363485.cms?from=mdr
- https://www.researchgate.net/publication/320414311_Challenges_to_Farm_Produce_Marketing_A_Model_of_Bargaining_between_Farmers_and_Middlemen_under_Risk