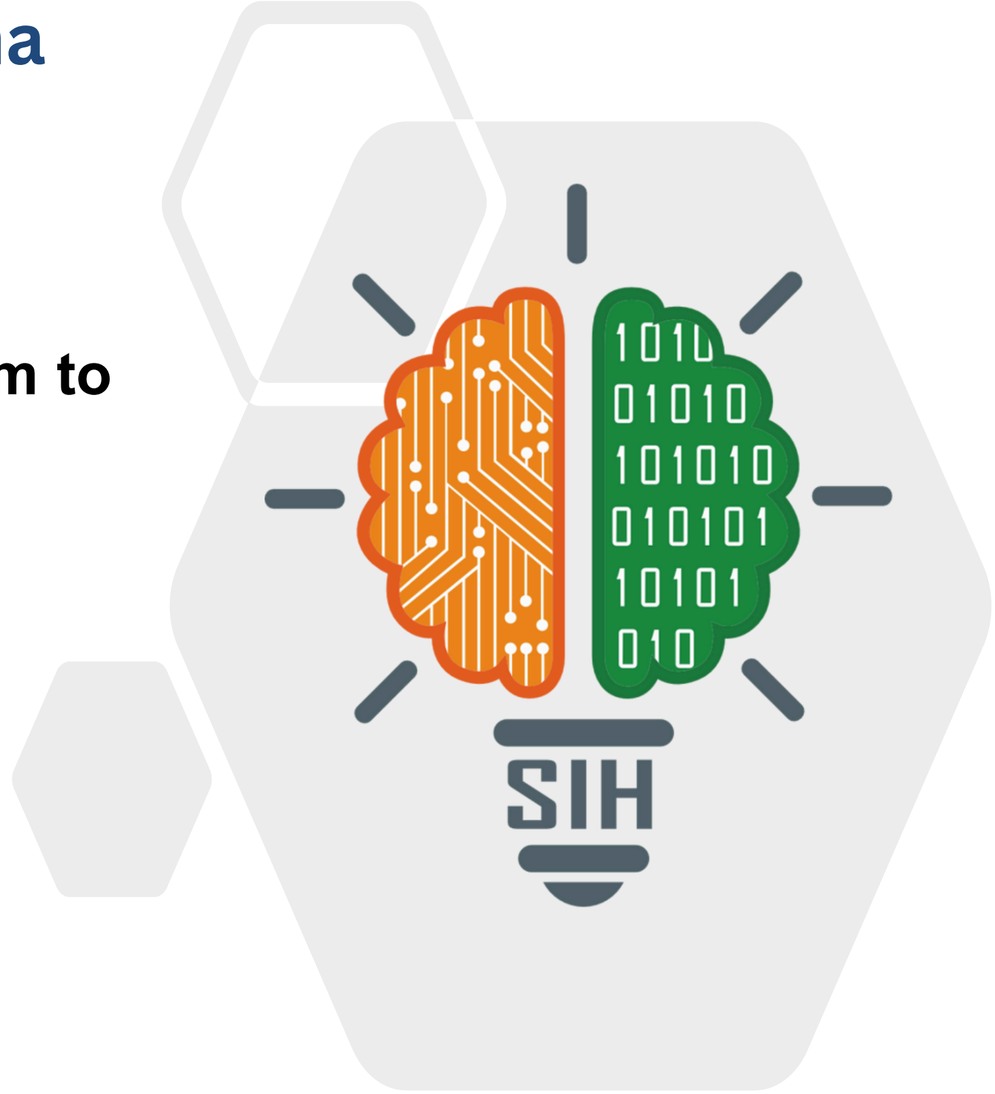
SMART INDIA HACKATHON 2025

EduFarma

- **Problem Statement ID – SIH25075**
- **Problem Statement Title- Gamified Platform to Promote Sustainable Farming Practices**
- **Theme- Agriculture**
- **PS Category- Software**
- **Team ID- 83063**
- **Team Name- QuantumCodersx**



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Gamified Sustainable Farming Platform

Proposed Solution

- ***Gamified Platform*** – *Farming practices as fun missions & rewards.*
- ***Personalized Tasks*** – *Challenges based on crop, farm size, location.*
- ***Progress & Recognition*** – *Scores, badges, dashboards, leaderboards.*
- *Farmer-Friendly Design – Mobile, local languages, offline support.*

Addresses the Problem

- ***Engages Farmers*** – *Turns boring training into fun, interactive learning.*
- ***Builds Habits –*** *Missions and rewards encourage regular eco-friendly practices.*
- ***Peer Motivation*** – *Leaderboards and sharing drive healthy competition.*
- ***Accessible to All*** – *Works offline, supports local languages, simple to use.*

Uniqueness of the Solution – EduQuest

- ***Gamified Farming Education –*** *First-of-its-kind platform turning sustainable practices into fun challenges.*
- ***Personalized Missions*** – *Tasks tailored to farmer's crop, land size, and location.*
- ***Offline & Multilingual –*** *Works in low-connectivity areas with Odia/Hindi/English support.*
- ***Community + Rewards –*** *Combines peer sharing, leaderboards, and real-world recognition.*

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TECHNICAL APPROACH

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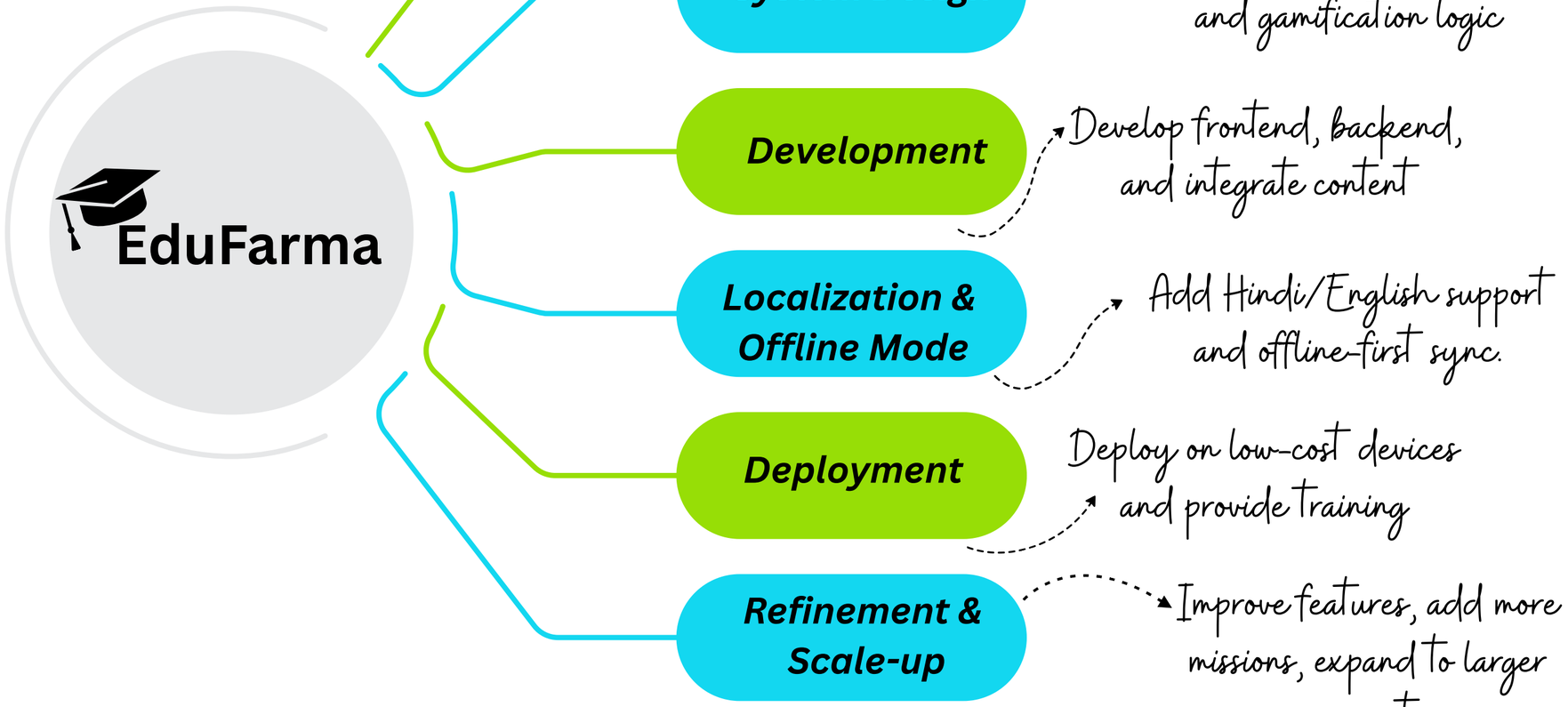
SOFTWARES

FRONTEND
- React
- TypeScript
- Vite

BACKEND
- Node
- JavaScript

DATABASE
- SQLite3

Methodology and Process for Implementation EduQuest



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FEASIBILITY AND VIABILITY

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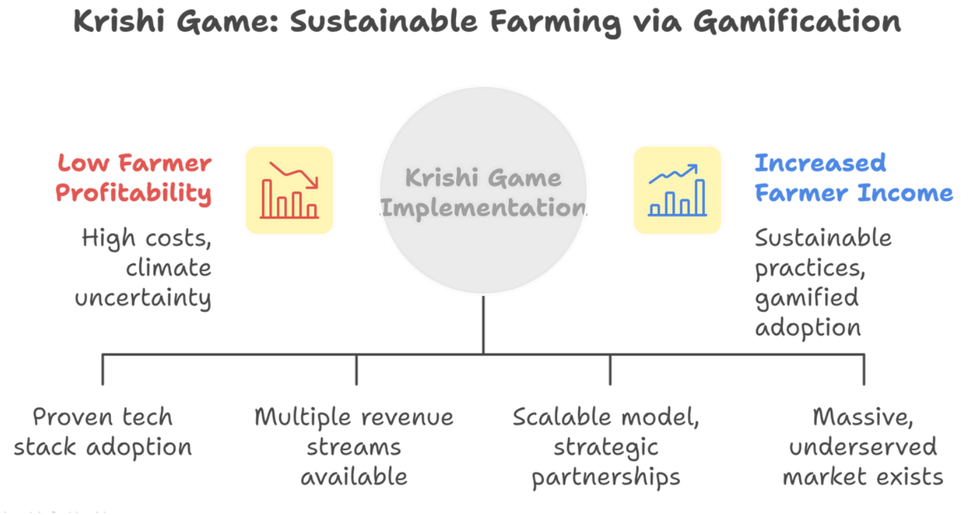
ANALYSIS OF THE FEASIBILITY OF THE IDEA

- *Uses existing frameworks **(React/Flutter, Firebase/SQLite)** to ensure **low-cost, quick development**.*
- *Affordable to scale as it relies on **cloud-based and open-source technologies.***
- *Easy-to-use **mobile interface** with local **language** support makes it farmer-friendly.*
- *Encourages community participation, making adoption easier through peer **influence**..*



POTENTIAL CHALLENGES

- ***Digital Literacy Gap –** Some farmers may struggle with using mobile apps.*
- ***Limited Internet Access** – Rural areas often face poor or no connectivity.*
- ***Adoption Resistance –** Farmers may hesitate to change traditional practices.*
- ***Sustained Engagement –** Keeping farmers motivated over the long term can be difficult.*

STRATEGIES TO OVERCOME CHALLENGES

- ***Simplified UI & Training –** Use icons, voice prompts, and short training sessions to bridge the digital literacy gap.*
- ***Offline-First Design –** Enable app usage without internet and auto-sync when online.*
- ***Community Champions –** Involve progressive farmers or local leaders to influence and motivate adoption.*
- ***Gamified Rewards –** Provide points, badges, and recognition to sustain long-term farmer engagement.*

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IMPACT AND BENEFITS

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POTENTIAL IMPACT ON TARGET AUDIENCE

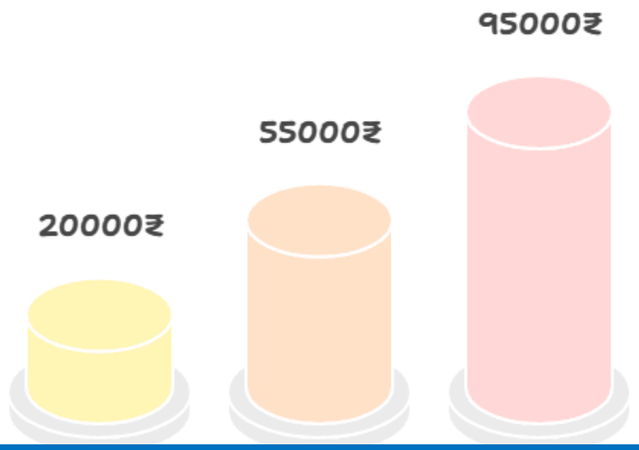
- ***Behavioral Change at Scale*** *– Transforms sustainable farming from a theory into a daily habit through gamified missions.*
- ***Youth Engagement in Farming*** *– Makes agriculture cool, digital, and rewarding, motivating the next generation of farmers.*
- ***Community Empowerment*** *– Builds connected farmer networks where peers inspire, compete, and learn from each other.*
- ***Environmental & Economic Gains*** *– Promotes eco-friendly practices that improve soil health, save water, and reduce input costs.*

1 INITIAL ADOPTION PHASE

2 GROWTH IN ECONOMIC BENEFITS

3 MASTERY AND PEAK INCOME

Economic Benefitsof Krishi Game Adoption



BENEFITS OF THE SOLUTION

- ***Engaging & Fun Learning*** *– Farmers adopt sustainable practices through interactive missions and rewards.*
- ***Personalized Guidance*** *– Tasks tailored to each farmer's crop, land size, and local needs.*
- ***Inclusive Access*** *– Works offline, supports Odia/Hindi/English, and is simple for all farmers to use.*
- ***Recognition & Motivation – Badges, leaderboards, and real-world incentives boost long-term participation.***

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RESEARCH AND REFERENCES

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Government Reports & Schemes –

- *Ministry of Agriculture & Farmers Welfare (India)*
  👉 *agricoop.nic.in*
- *PM-KISAN, Paramparagat Krishi Vikas Yojana (PKVY), Soil Health Card Scheme*
  👉 *pmkisan.gov.in | pgsindia-ncof.gov.in/PKVY | soilhealth.dac.gov.in*

International Sources –

- *FAO (Food and Agriculture Organization) – Sustainable Agriculture Reports*
  👉 *fao.org*
- *UN SDGs (Goal 2: Zero Hunger, Goal 12: Responsible Consumption & Production)*
  👉 *sdgs.un.org/goals*

Academic & Research Papers –

- *Journals on Gamification in Education & Agriculture*
  👉 *researchgate.net*
- *Studies on Digital Tools for Rural Development*
  👉 *sciencedirect.com*