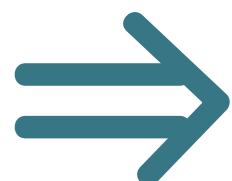# SMART INDIA HACKATHON 2024

TITLE PAGE

- **Problem Statement ID –** 1640
- **Problem Statement Title-** Assured Contract Farming System for Stable Market Access
- **Theme-** Agriculture, FoodTech & Rural Development
- **PS Category-** Software
- **Team ID-**
- **Team Name- error 418**

IDEA TITLE

SMART INDIA HACKATHON 2024

- ## Proposed Solution (Describe your Idea/Solution/Prototype)

Revolutionize Indian agriculture with a digital platform that directly connects farmers to buyers, ensuring stable market access through smart contracts.
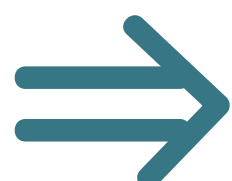
⟹ Why This Topic?
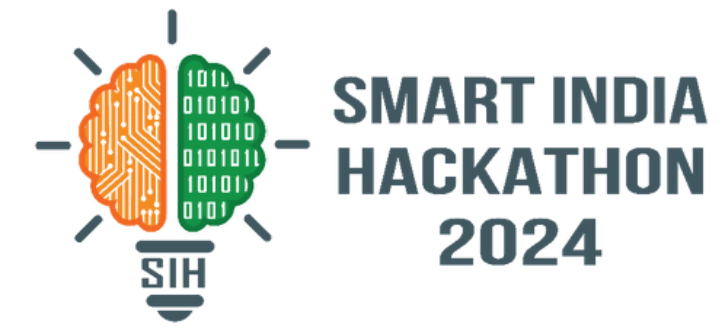Empowering Indian Farmers: Tackles income instability and market access issues.
Transformative Impact: Modernizes agriculture with cutting-edge technology.
Critical Need: Addresses the vulnerabilities of India's agricultural backbone.

⟹
- **Blockchain Platform:** Connects farmers to buyers via secure smart contracts.
- **Decentralized Market:** Transparent pricing and guaranteed access.
- **Income Stability:** Timely payments, reducing fluctuations.
- **Traceability:** Blockchain and IoT ensure transparency and quality.
- **Risk Management:** Real-time risk mitigation using IoT and insurance.
- **Innovation:** Merges automation, decentralization, and transparency.

TECHNICAL APPROACH

Technologies used:

- Frontend: HTML, CSS, JavaScript (with relevant frameworks).
- Backend: Express (javascript) / Django (python)
- User Authentication: Firebase.
- Blockchain & Smart Contracts: Solidity.
- Primary Database: MySQL/MongoDB.
- Hosting Service: Vercel/Firebase.
- Collaboration: GitHub.

FEASIBILITY AND VIABILITY

Feasibility: Leverages existing technologies, cost-effective.

Challenges:

- **Adoption:** Farmers' reluctance to use digital platforms.
- **Trust:** Ensuring confidence in digital contracts.

Strategies:

- **Education:** Outreach programs to train farmers.
- **Incentives:** Initial incentives for early users.

IMPACT AND BENEFITS

- **Target Audience:** Indian farmers, buyers (retailers, wholesalers).
- **Social Impact:** Enhances farmers' livelihoods.
- **Economic Benefit:** Stabilizes income through assured contracts.
- **Environmental Benefit:** Reduces waste via better planning.

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RESEARCH AND REFERENCES

SMART INDIA
HACKATHON
2024
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Details / Links of the reference and research work

- **Study of smart contracts**

Tyagi, Shobha and Gogireddy, Chennakesava and Varikuppala, Chandu and Nalabothu, Koteswararao, Study of smart contracts (March 3, 2023). Proceedings of the International Conference on Innovative Computing & Communication (ICICC) 2022, Available at SSRN: https://ssrn.com/abstract=4376852 or http://dx.doi.org/10.2139/ssrn.4376852

- **Smart Contracts in Blockchain Technology: A Critical Review**

Taherdoost, H. Smart Contracts in Blockchain Technology: A Critical Review. *Information* **2023**, *14*, 117. https://doi.org/10.3390/info14020117

- **Challenges to Farm Produce Marketing: A Model of Bargaining between Farmers and Middlemen under Risk**

Ranjan, Ram. (2017). Challenges to Farm Produce Marketing: A Model of Bargaining between Farmers and Middlemen under Risk. Journal of Agricultural and Resource Economics. 42. 386-405. 10.22004/ag.econ.264068.